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THE PRICING OF HIGHWAY SERVICES

JAMES M. BUCHANAN *

TRAFFIC congestion on the nation's highways and streets has come to be recognized as a major social problem in recent years. The recommended solutions usually take the form of expansion and reconstruction of the highway system, all of which involve considerable additional investment of resources in highways and streets. Such solutions are necessarily long run ones, and pose extremely difficult problems of implementation. Even if fully accepted by highway planning agencies and by state and local governmental bodies, these proposals provide no relief within the immediate future. Relatively little attention has been given to the policy alternative which will tend to eliminate the most obvious of the congestion evils both in the short and the long run, namely, that of operating the road and street system we now possess in a more efficient manner. Traffic congestion may be reduced by expanding the amount of effective highway surface relative to the number of vehicles. Both highway surface and the number of vehicles are variables subject to public control. The second of these has been almost entirely overlooked in both popular and academic discussion.

It is especially important that policy considerations take into account some regulation of the number of vehicles at this time. During the current period of defense mobilization, alternate needs for resources may be given priority over highway needs, thereby precluding any sizable expansion of the highway system. In addition, the reduction of congestion by road expansion can never represent an adequate solution in major urban centers. Our cities were simply not built to accommodate motor vehicle traffic of the magnitude now existing, and it is inconceivable to think of reconstructing them for this purpose. Expressways, limited access, elevated roads, etc. can help, but, in the main,

* The author is professor of economics at Florida State University. He is indebted to the following for helpful comments and suggestions: Clark L. Allen and Marshall R. Colberg, Florida State University; Lincoln Clark, New York University; James H. Thompson, West Virginia University; and Charles P. White, University of Tennessee.

the amount of street expansion is limited. Here the primary variable becomes the number of vehicles. A third reason that emphasis on this variable assumes importance is that congestion is essentially a peak-load problem. The existing facilities are more than adequate in off-peak periods.

If traffic congestion does represent an excessive social cost, so that some limitation of the number of vehicles is considered desirable, essentially two means are available by which this may be accomplished. First, governmental units may directly ration the available highway and street facilities among users by outright prohibition of some types of vehicles and the imposition of limitations upon other types. Although there is some argument for a limited use of this method, a second and more appropriate and effective means of limiting the number of vehicles lies in the utilization of the rationing device of the free economy, namely price. This paper considers the pricing of the nation's highways and streets primarily in terms of properly rationing the available facilities among potential users.

Highway services are not free. User taxes have been recognized as " prices " charged for the use of roads and streets. The pricing function of user taxes generally discussed, however, has been that of setting up some criteria of investment.[1] The corollary function of highway prices in limiting the demand for highway services has never been considered adequately. This may be attributed to the fact that highway user taxes as " prices " have seldom been made distinct from highway user taxes as " taxes." Such taxation has long been recognized as an appropriate part of the combined national and local tax structure. This is the one area in which taxation on the principle of benefit received has been almost universally accepted. The major differences of opinion concerning highway user taxes have been centered around the problem of allocating total benefits among highway users of different types and between highway users and other beneficiaries. This concentration on the allocation of benefits and thus the equitable means of distributing total highway costs has all but obscured the far more important problem of adjusting user charges in order to promote an optimum utilization of an existing highway system.[2] The revenue-producing function of user taxes becomes secondary in this approach, and " equitable " rates of tax are less significant than economically " correct " prices.

[1] See, for example, James C. Nelson, " Investment Conditions in Highways " (mimeographed), p. 17. Paper delivered at the meetings of the Pacific Coast Economic Association, December 28-30, 1950; Shorey Peterson, " The Highway from the Point of View of the Economist," *Highways in Our National Life*, ed. Jean Labatut and Wheaton J. Lane (Princeton: Princeton University Press, 1950), pp. 190-200.

[2] There are some partial exceptions in which an economic approach is taken to highway problems. In addition to the two articles cited above, see Shorey Peterson, " Highway Policy on a Commercial Basis," *Quarterly Journal of Economics*, XLVI (1932), pp. 417-443; E. D. Allen, " The Theory of Highway Costs and Their Allocation," *Journal of Land and Public Utility Economics*, XV (1939), pp. 269-276, 404-415; James C. Nelson, " Highway Development, the Railroads and National Transport Policy," *American Economic Review*, XLI (May 1951), pp. 495-505. Other and more general works which include some discussion of these aspects are: E. D. Allen and O. H. Brownlee, *Economics of Public Finance* (New York: Prentice-Hall, 1947), Ch. XVIII; R. W. Lindholm, *Public Finance and Fiscal Policy* (New York: Pitman and Co., 1950), p. 470f; Hugh Dalton, *Principles of Public Finance*, 3d ed. (London: Routledge and Kegan Paul, 1949), p. 181; W. J. Schultz and Lowell C. Harriss, *American Public Finance* (New York: Prentice-Hall, 1949), p. 555.

The Highway System as a Public Enterprise

The highway function of government has not been made clearly distinct in form from the other more general functions.[3] For most governmental services, it is not necessary that a price be charged beneficiaries except in so far as benefit payment for the costs of the undertaking is justified. With highways, however, the fact that benefit payments are generally accepted as equitable has obscured alternate needs for highway prices. Prices would be required even if the benefit principle of financing costs were held to be completely inapplicable.[4] A necessary condition for the placing of a price on public services is that particular units of the service can be isolated and imputed to specific users; but this is not a sufficient condition. Free provision of the service must result in an uneconomic use of the service if a price is to be fully justified; the criterion is the elasticity of demand for the service.[5] If people, individually and collectively, will utilize approximately the same amount of highway services at a zero price as they will at a price which covers the marginal social costs of providing the services, then there is little economic justification for prices as rationing devices. But this is evidently not the case; the elasticity of demand for highway services is considerably above zero over any such range.

If prices are not set at high enough levels, an excessive utilization of the available facilities will result. But the highway plant does not fit any of the familiar economic models for public enterprises. Highway services are not made available to users in discrete units. Although the road system may be considered a physical plant embodying a certain investment of resources, its output is independently indeterminate. The output of highway services is determined by the demand for such services, and in this rough sense supply is always adjusted to demand. Therefore, if the prices are set too low, no shortage will result such as would be the case if electricity rates were set too low. No demanders are left out of the market completely, or are prevented from getting as much as they desire. Conversely, if prices are set too high, no surplus disposal problem appears to exist either. Variations occur in the quality of the highway services made available rather than in the number of units of a given quality of service. Congestion prevents no motorist from traveling; it merely causes the units of highway service which he receives to be of an inferior quality. If the price is set too low, this will be indicated by an excessive deterioration in the quality of highway services made available to all motorists.

Highways and motor vehicles are highly complementary products, and the social productivity of resources devoted to the production of each is

[3] This point is discussed by Peterson, "The Highway from the Point of View of the Economist," *op. cit.*

[4] The provision of public medical care seems a good example here. It might be decided that a system of public medical care should not be financed on the benefit principle. In spite of this, a "price" to direct beneficiaries might be necessary to prevent tremendous wastage of economic resources.

[5] A. C. Pigou, *A Study in Public Finance*, 3d. (rev.) ed. (London: Macmillan and Co., 1949), p. 25.

primarily determined by the supply of the other. An excessive demand for highway services implies excessive investment of resources in highway utilization. This plethora of motor vehicles in turn makes additional investment in highway construction appear extremely productive. In more technical terms, it seems likely that the marginal social product of resources invested in highway utilization is lower than that of like resource units in alternative employments. This is due to the fact that the marginal product of such resources to private owners is greater than the marginal product to society as a whole.[6] The progressive deterioration in quality of highway service as congestion increases does not impinge directly upon the marginal user. Rather it is primarily a "spillover" cost represented in poorer service provided all users. An appropriate schedule of prices would tend to equalize resource returns at the margin. From this point of view, the primary purpose of prices is one of restricting demand, and has no specific connection with the financing of the public enterprise.[7] Problems of "public" financing only arise if this appropriately set system of user prices fails to cover the total costs of construction and maintenance.[8] Only in this case should tax financing be considered.

Criteria for Efficient Operation

For any type of highway service, the "correct" price is the demand price which is equal to the marginal social cost incurred in providing a unit of that type service. This cost is made up of two major components: first, direct physical resources which are used up, or more correctly, alternative products which could have been produced by these resources, and second, the additional burdens or costs that are imposed on other users in terms of reduced operating efficiency. The latter indirect or spillover costs have seldom been taken into account due to a concentration on direct costs. Proposals which have been made to include charges for "differential road occupancy"[9] partially take these indirect costs into account, but these are generally confined to differences in vehicle type. Full recognition of these spillover costs must include consideration of differences in traffic density on various parts of the road system as well as differences in density during different time periods. Such costs clearly increase in some direct relation to traffic density. A significant share of the reduced efficiency is reflected in the additional man hours which are required to move a vehicle a specified distance in congested traffic. An added social cost of congestion is represented by the increased probability of accidents which directly affects budgets of individual users in increased insurance rates.

Although it is extremely difficult to place accurate estimates on the magnitude of these indirect costs,[10] certain rough conclusions may be made. They can be expected to be higher on the much traveled or primary routes than

[6] Cf., Frank H. Knight, "Fallacies in the Interpretation of Social Costs," *The Ethics of Competition* (London: Allen and Unwin, 1935), p. 219f.

[7] Cf., Knut Wicksell, *Finanztheoretische Untersuchungen* (Jena: Gustav Fischer, 1896), p. 136.

[8] Peterson, *loc. cit.*, p. 198.

[9] Cf., Charles L. Dearing, "Distribution of Highway Costs Among Taxpaying Groups," *Proceedings, National Tax Association* (1941), pp. 726-735.

[10] For a discussion of some of these difficulties, see James C. Nelson, "Investment Conditions in Highways," *op. cit.*

on secondary roads. They are likely to be significantly greater in urban areas than in rural, and perhaps increase with population as well as traffic density. They are much greater on week ends and holidays on egress routes from urban centers. On city streets and highways contiguous to cities during any given day, these costs are much greater during morning and evening rush hours than during midday or night hours.

Direct marginal costs are limited to that portion of total maintenance costs which varies directly with road usage. It is clear that these are very small in relation to the total annual cost of providing the highway system, a significant portion of which is in the nature of fixed charges which are independent of the amount of utilization. Annual costs such as interest on the initial capital outlay and of maintenance which is required due to weather-caused deterioration have no relation to road use and hence are not reflected in marginal costs. The direct marginal costs which are present will vary with vehicle type, increasing with vehicle weight. They will vary from one road type to another depending on the physical characteristics of both the vehicle and the road. From one time period to another they should not vary as much as the indirect marginal costs.[11]

Certain tentative conclusions may be reached concerning the relative charges which should be placed on different highway users. (1) Secondary road users should be required to pay less than primary road users per ton or passenger mile. On most secondary roads spill-over costs in terms of reduced operating efficiency of other vehicles are hardly present at all; therefore, all that must be covered by the price are the costs of used-up resources. In general, users of urban roads and city streets should pay higher prices than rural road users. (2) Heavier and larger vehicles should be charged higher rates than lighter and smaller ones because both the direct and indirect components of marginal social cost are greater. (3) Slower vehicles should, within limits, be charged higher rates than faster vehicles. This is because they add more to congestion and thus indirect costs. (4) Vehicles known to travel more during congested time periods should be charged higher rates. (5) Higher rates should be charged users on week ends and holidays than during other times, especially the users of egress routes from urban communities. (6) In urban areas higher rates should be charged during rush hours than during other hours of the day.

A structure of prices incorporating the above differentials would represent a close approximation to the ideal one. It is, of course, evident from the outset that no more than an extremely rough approximation to this structure could ever be realized in practice. As long, however, as traffic congestion is considered by most people to be excessive, certain steps in the direction of attaining this type of pricing structure clearly should be taken.

[11] They will vary somewhat over time. If the roadbed has been constructed improperly so that adequate drainage is not present, then more resources are used up by the passage of a vehicle over the road during a rainy season than during dry periods. This might be true to some extent even on properly constructed roads, especially during spring thaws in some northern states, and might justify the levy of supplementary charges on heavy trucks during such periods.

Practical Steps in Improving Efficiency

A comprehensive and highly differentiated system of tolls would be required to secure the "ideal" pricing structure. Obviously, such a system would be completely unworkable from an administrative point of view, and would be uneconomic besides. For the most part, the pricing system must be based on the use of the type of highway user taxes now levied in most states. But with relatively little change or modification it appears that the system of highway user taxation now employed could be made to approach one which would achieve efficient operation of the existing highway structure. Of course, the level at which the motor vehicle taxes of various types are currently set probably has little connection with even the roughest estimate of marginal social costs. Policy has not even been thought of in these terms; it could hardly be expected to have yielded quantitatively acceptable results. The fact that the problem of excessive congestion is present on major segments of the highway system indicates that these "prices," all or in part, are not set high enough.

Prices charged to users must vary directly with mileage traveled. The tax on gasoline serves as a rough equivalent to a mileage toll.[12] Gasoline usage not only increases in a direct relation to mileage traveled but also to vehicle weight. Gasoline taxation alone, however, will not provide a satisfactory means of taxing users of different portions of the road system at different rates. Rates cannot easily be made lower on secondary roads than on primary roads, although some adjustment of rates between urban and rural areas seems possible and desirable. The desirable gasoline tax rate, if it is to be a uniform rate per gallon, will perhaps be lower than optimum for vehicles using primary routes and urban streets and higher than optimum for vehicles using secondary and rural roads. Gasoline taxation cannot adequately take account of the varying spillover marginal costs in different time periods. But some adjustments seem possible here. There seems no reason why gasoline tax rates need be uniform over time. Rates could easily be increased significantly over the five day Labor Day week end for example. This type of policy would encourage tanking up and extra storage, but these are costly, and a judicious increase in the tax should tend to limit road usage somewhat during such a congested traffic period.[13] Gasoline taxes obviously could not take into account differing spillover costs during different hours of the day.

As indicated above, it seems certain that an over-all system of toll charges would prove impracticable. But there seems to be ample evidence to indicate

[12] The argument has been advanced that the demand for gasoline is very inelastic over normal price ranges and therefore taxation cannot be considered as restricting road usage. In any case, however, the coefficient of elasticity is greater than zero, and a recent study by my former colleague indicates it to be much higher than is usually believed. Cf., Lincoln Clark, "The Elasticity of Demand for Tennessee Gasoline," *The Journal of Marketing* (April, 1951), pp. 399-414.

[13] A similar type of pricing adjustment has recently been proposed for railroads with low rates to be charged in off-peak periods when marginal costs are low and high rates in peak periods when marginal costs are high. The problem for railroads is, however, much more simple, and thus the proposal much more practicable, than for highways. See David G. Tyndall, "The Relative Merits of Average Cost Pricing, Marginal Cost Pricing, and Price Discrimination," *Quarterly Journal of Economics*, LXV (August, 1951), p. 368f.

that a wise use of selected tolls would promote a more economic use of the road structure. The current and increasing popularity of toll charges for newly constructed express highways is indicative of a general public recognition of this fact.[14] Little attention has been given to the use of tolls on existing highways since tolls, like user taxes, have been primarily considered as financing devices rather than rationing devices. A careful application of toll charges upon existing highways would greatly reduce congestion and could take into account differences in marginal spillover costs not reflected in the gasoline tax. For example, many large trucking companies have found it advantageous to move trucks through congested urban areas only during night hours. If these companies find this profitable after a calculation taking into account only private marginal costs, certainly society should find it advantageous to reallocate vehicles toward the hours when the whole road system is relatively underutilized. An appropriate system of tolls might well make rush hour travel on urban routes by commercial carriers almost prohibitive while making travel during night hours free of toll. The levying of toll charges on all vehicles on portions of certain existing main traveled highways likewise seems a reasonable step. Frequency of entry and egress points would prevent collection from all road users, but the restrictive purpose of the toll can be accomplished by the placing of collection stations only on the now congested segments.[15] Some vehicles would be encouraged to take alternative and uncongested routes.

Motor vehicle license fees usefully complement gasoline taxes and selected tolls in the desirable pricing structure. The number of vehicles is important as a factor making for added spillover costs in addition to mileage traveled. The license fee represents the appropriate means of taking this into account. This fee should vary directly with the size of the vehicle population regardless of the total mileage traveled by all vehicles. An appropriately set fee would tend to restrict too severely those vehicle owners who travel relatively little and not severely enough those who travel a great deal. This is partially offset, however, by the fact that the vehicle owners who travel little are likely to operate their vehicles at the times when the marginal social costs are highest.[16] A major advantage of the license fee is that it allows for a much finer distinction among vehicle types than is present with the gasoline tax and thus can include differences in marginal cost which cannot otherwise be included. License charges can be varied from vehicle to vehicle without difficulty, and the subclassifications can be made as narrow as is desired. Vehicles of different weights, sizes, horsepowers, ages, etc., can be classified and each type charged different fees. Vehicles known to add to traffic congestion can be burdened with heavier fees.

[14] For a recent study of the modern toll road movement, see Wilfred Owen and Charles L. Dearing, *Toll Roads and the Problem of Highway Maintenance* (Washington: Brookings Institution, 1951). For a more popular discussion, see *The New York Times* (Sunday, November 25, 1951), Section 2, Pt. II.

[15] The social costs incurred in the collection of tolls would, of course, have to be taken into consideration in estimates of the general usefulness of a proposed toll system.

[16] Cf., Harold M. Groves, *Financing Government*, 3d. ed. (New York: Henry Holt & Co., 1950), p. 311.

Vehicles which are known to travel mainly on secondary roads (farm pick-up trucks) can be charged lower rates, those on primary routes and urban streets (commercial vehicles) higher rates, although this type of distinction could not be carried very far. For the most part, motor vehicle license fees now levied in most states are rational in the sense of relative charges upon different type vehicles. Differential license fees increasing with weight, horsepower, and load capacity, although based upon benefit considerations, represent sound pricing of highway services. The varying of license fees inversely with age in some states (e.g., Minnesota) is evidently unsound economically, but this is the only noticeable exception to the general conclusion above. The major policy step which should be taken is a general increase in the absolute level of license fees.

The fact that the national highway system is composed of forty-eight separate state systems, and that state and local governmental units determine independently the level of highway prices, has not been discussed. But without discussing the full implications of this fact, certain presumptions concerning the relative levels of prices in separate states can be made. It seems likely that the spillover costs are more important than direct costs in all states on most parts of the road system. Therefore, prices charged to highway users of all types should be higher in those states possessing the relatively heavier traffic densities. Those states including and surrounding major urban centers should levy higher charges than the largely rural states.

City license and perhaps city gasoline taxes are economically, as well as fiscally, sound. For most major cities traffic congestion can only be eliminated by reducing traffic relative to the street surface. Continued excessive congestion in such cities indicates that the cities are not taking adequate measures to limit the usage of their available streets.

An extremely interesting adjunct to the highway pricing problem is that of municipal parking. Due to the failure of most municipalities to restrict street usage sufficiently, the demand price for available parking facilities is pushed upward causing rent-like returns to accrue to operators and owners of the facilities, public or private. When parking facilities are partly owned by the municipality and partly by private persons, the rents to private operators are further increased by the failure of the municipal parking authorities to charge adequate fees. Parking fees are one means of limiting street usage, of course, and the recent proposal for substantial overnight parking fees in New York City represents a step in the proper direction.

The policy recommendations made here do not imply an indiscriminate increase in highway user charges. Although it seems clear that in most states both gasoline taxes and motor vehicle license fees should be substantially higher than their current levels, in-

creases should not be made without a clear recognition of the rationale for them. In a period such as the present, when demands upon strategic materials for mobilization purposes may not allow for normal or " adequate " maintenance of highway facilities, the obvious solution lies in increased user charges, not to finance needed expansion, but to limit usage of the roads. Increases should be as selective as is administratively practicable, and the significant increases should be centered in highly urbanized sections of the country. Unless steps of this kind are taken, congestion will continue to represent an unsolved problem.

Highway Prices, Revenues, and Costs

Since the demand for highway services is probably inelastic over the relevant price range, the optimum practicable pricing structure would yield greater total revenue than is currently collected. But the differentials among user types would be greater than are now present; thus the proportion of total costs covered from user revenues would probably vary significantly on different segments of the highway system of a state. Revenue collected from users of secondary roads would comprise a smaller proportion of total annual costs than would be the case for primary roads. A greater share of the total annual costs of urban streets than of rural roads would be paid by users.[17] Even with currently employed financing methods, highway tax revenues on primary routes are more than sufficient to maintain these routes, and the surplus is used to maintain secondary roads on which user revenues are not sufficient.[18] But instead of this practice being uneconomic as has been suggested,[19] it is entirely consistent with rational operation of a highway system. The relation between the marginal social cost incurred in highway utilization and the average total cost of providing the highway service should not affect the operation of the existing system. This relation only becomes important when expansion or contraction of the highway plant is being considered; and, even in this case, total revenues in excess of total costs are not a necessary condition for road construction, although they constitute a sufficient one. Investment decisions must be made by comparing the best estimates of total social benefits with the total social costs on each part of the road and street system, an admittedly very rough sort of comparison.

The problem of effectively operating a plant of a given size is conceptually separate from the problem of determining when and how much the plant should be expanded.[20] The " total "

[17] This statement presumes that the production function for highway services is roughly linear.

[18] Cf., G. P. St. Clair, " Nation-Wide Requirements of the Highway Program," *Proceedings, National Tax Association* (1948), p. 185.

[19] R. W. Lindholm, " Note on the Benefits Justification of the Gasoline Tax," *Southern Economic Journal*, XVII (1950), p. 56f; R. M. Zettel, " The Division of Financial Responsibility of Highways Between Users and Other Beneficiaries," *Proceedings, National Tax Association* (1948), p. 196; Charles L. Dearing, *American Highway Policy* (Washington: Brookings Institution, 1941), pp. 131, 203.

[20] Cf., I. M. D. Little, " Electricity Tariffs—A Comment," *Economic Journal*, LXI (December, 1951), p. 878.

conditions which must be evaluated in making the latter decision are much more difficult to formulate than are the marginal conditions determining optimum operation of the given system.[21] Also, existing practices in highway financing cannot readily be appraised in terms of an optimum rate of expansion.

Conclusion

It should never be forgotten that the highway problem is essentially one of peak load. There is little traffic congestion, even in Manhattan, at three in the morning. In attempting to decide how many resources should be devoted to highways and streets, society must choose between providing a structure which is too large in off-peak periods and one which is too small in peak periods.[22] It seems certain that if enough resources were to be devoted to highway construction to reduce congestion to acceptable proportions in peak traffic periods, overinvestment in highways would be present. A highway system of compromise size would appear preferable. This would mean that some highway resources would be wasted in off-peak periods. Policies aimed at diversion of traffic are fundamentally sound. Some diversion would be accomplished by the pricing structure outlined above, but the amount of diversion that could be expected is limited. Thus, some general limitation on highway and street usage must be present if congestion is to be reduced in the short run and overinvestment prevented in the long run.

It is hoped that this analysis points the way toward a more realistic approach to some of the problems facing highway administrators and policy makers. Entirely too much discussion, by academicians and practitioners alike, has been concerned with what various groups "should pay" in order to compensate for benefits received. A rational structure of prices might be inequitable or unfair to some groups of users. But so are the prices of Cadillacs. The motorist who drives a new and efficient vehicle does "benefit" more from highways than does the motorist who drives the "Model A." But the latter should pay a higher price because he adds more to social cost. Until and unless heritages of the "just price" are removed from discussions of highway financing, little progress can be made.

[21] Throughout this paper the operation of the highway structure has been considered in isolation from the remaining portions of the transportation system. The inter-relationships must be recognized, however, and the dependence of highway policy upon the operation policies for competing media acknowledged. A national policy of rational operation of the railroad system might well cause much of the investment in motor truck transport to become uneconomic in some areas, thus lowering the marginal costs of highway services. (On this and other points, see Tyndall, *op. cit.*, especially Pt. III.) But the fact that prices for competing transportation services are probably above rather than below marginal cost levels makes the case for increasing highway user prices toward their marginal cost levels even stronger than it would otherwise be. (See H. S. Houthakker, "Electricity Tariffs in Theory and Practice," *Economic Journal*, LXI [March, 1951], p. 10.)

[22] Cf., Little, *op. cit.*, p. 880.

TOLL ROADS AND THE CRISIS IN HIGHWAY FINANCE

D. NETZER *

CONSTRUCTION and planning of toll roads are currently moving ahead at a surprising rate despite recent indications that the toll road revival would peter out in response to determined opposition by many public officials and by most highway user groups. As of late 1951, more than 600 miles of major toll arteries, representing capital outlays aggregating about $600 million, were in operation in Pennsylvania, Connecticut, Maine, New Hampshire, New Jersey, and Westchester County, New York. Toll highways which will double this mileage and investment were under construction in Colorado, Oklahoma, and New York; an additional 600 miles of facilities estimated to cost a further $600 million were planned for early construction in Ohio, West Virginia, Virginia, and Indiana.[1] Moreover, general legislative authorizations for toll road studies or construction, or both, exist in at least a half dozen other states. Some perspective on the magnitude of the investment in the fifteen projects in operation, under construction, and specifically planned may be gained by comparing it—around $1.75 billion—with the estimated unamortized cost of *all* primary state highways ten years ago—about $7.7 billion.[2]

Explanation of the continued advance of the toll road movement in the face of heated opposition would provide a fascinating case study of the politics of highway policy formation. The purpose of this article, however, is not to describe the success of the movement, but rather to analyze the extent to which the toll financing method provides a solution to the seemingly chronic crisis in highway finance. The elements of this crisis are familiar enough: to the highway needs produced by a decade or more of neglected maintenance and inadequate replacement have been added the needs resulting from a rapidly increasing and more highly urbanized population which owns and uses more intensively a much greater number of motor vehicles, most of which are heavier and capable of higher speeds than their counterparts of prewar days. While the demand for

* The author is economist, Research Department, Federal Reserve Bank of Chicago. The views expressed are not necessarily those of the Bank or of the Federal Reserve System.

[1] This information is based upon numerous recent newspaper and magazine articles, as well as two more substantial studies: Wilfred Owen and Charles L. Dearing, *Toll Roads and the Problem of Highway Modernization* (Washington: The Brookings Institution, 1951); and John F. McCarty, *Highway Financing by the Toll System* (Berkeley: University of California Bureau of Public Administration, 1951). In addition to the major arteries, there are some 20 scenic toll roads totaling 100 miles in length and the 122-mile Florida Overseas Highway to Key West. Owen and Dearing, *op. cit.*, p. 5.

[2] Board of Investigation and Research, *Public Aids to Domestic Transportation*, 79th Cong., 1st sess., House Document No. 159 (Sept. 19, 1944), p. 236.

highway improvements has continued to grow by leaps and bounds, highway agencies have faced many obstacles in their attempts to secure sufficient supplies of labor and materials to make up the backlog and keep abreast of growing demands.

In any case, some of these obstacles would have been insurmountable in recent years, but many have been the product of inadequacies in existing policies in highway finance. Although the price level, and hence highway costs, has risen rapidly, there has been considerable resistance to increases in user tax rates. These rates, since they are specific rather than ad valorem, produce total revenues which have increased less than costs. Moreover, even though user tax rates have been increased (after some lags), highway agencies generally have been prevented by legislative direction from concentrating funds on those improvements most in demand—improvements of the high traffic density routes.

In fact, the maldistribution of user revenues is probably the single most important element of the current predicament. Existing patterns of highway expenditure are largely those which prevailed twenty and thirty years ago, in the early era of rapid road improvement. The objective then was to get the rural population " out of the mud " —to pave, or at least to surface, large mileages of rural roads as rapidly as possible. Roads which were physically passable in all weather actually were rapidly constructed, but at minimum standards with regard to pavement width, curvature, gradient, control of access, etc. But even after such a minimum standard network was constructed, highway revenues have continued to be diffused over a very large mileage of roads despite the fact that the revenues are largely generated by heavy traffic volumes on relatively limited road mileages. Today the obvious need is to concentrate the funds on improving the heavily traveled routes, both rural and urban. In other words, it is necessary to relate construction policy to needs as measured by use. There are all too few jurisdictions in which expenditures are related to needs as a planned policy.

Appeal of Toll Road Solution

In view of these difficulties, toll roads have an obvious attraction and, in fact, apparently impress numerous legislators and journalists as the panacea for highway problems. The much discussed existing toll roads, notably the Pennsylvania Turnpike which was the prototype for more recent projects, are high design facilities capable of carrying large volumes of mixed traffic for long distances at high speeds. These high standard roads can be, and have been, built in a very short span of years. They are financed through borrowing without general increases in user tax rates and without revision of the existing methods of apportioning highway user revenues. This borrowing has been possible, despite the familiar constitutional and statutory restraints on state government bond issues, largely because of the obvious appeal to the voters of the toll feature; that is, for these highly desirable projects bonds which are " self-liquidating " can be issued and they do not involve the increase in tax rates generally associated with borrowing. For many projects, the popular appeal is enhanced by the

fact that the toll's impact is in large part on out-of-state vehicles traveling through the state.

Messrs. Owen and Dearing point out, in their recent study of the toll road issue, that users would secure the same benefits from free roads of comparable design if such roads were constructed by concentrating user tax revenues in selected high density routes or by issuing bonds backed by gasoline and motor vehicle receipts or by the full faith and credit of the state.[3] The toll feature offers no particular engineering advantage. Essentially, the stimulus to toll roads is the political difficulty of securing the funds needed for early construction of costly high design roads through the traditional methods of highway finance.

The political expediency of toll financing generally has been acknowledged by its main adherents to be its principal advantage, but more sophisticated observers have adduced economic advantages as well. On the other hand, the strong opponents of toll roads have advanced a number of arguments against them which also fail to grapple with some of the fundamental economic issues. Among the common allegations are the following: toll roads involve duplication of investment since they usually must be paralleled by alternate free roads capable of accommodating short-haul traffic and vehicles unwilling to pay the toll; the existence of toll roads tends to undermine adequate maintenance of the parallel free road; the revenue bond financing method usually employed increases costs because of the typically higher interest rates on revenue bonds; and toll collection costs constitute an undue additional expense. Messrs. Owen and Dearing adequately dispose of these allegations, in the opinion of this writer, by demonstrating that they either do not reflect actual conditions or are of minor significance quantitatively.[4]

Toll Roads and Benefit Theory

Any conclusions as to the economic appropriateness of the toll method will, of course, be largely determined by the approach to highway finance in general. If it were agreed that the benefits from highway improvements are so diffused among the inhabitants of a state that it is impossible to isolate individual beneficiaries, and, in consequence, that highways should be supported from the general fund, toll financing obviously would be out of place. However, it is generally agreed that, at least for the main rural and urban routes carrying heavy traffic volumes, benefit financing is the appropriate solution. The benefit approach involves the following elements: (1) highway improvements are made in response to anticipated user demand and the improvements having the highest priorities are those which serve the largest volumes of traffic per dollar of cost; (2) highway users pay, through special charges, the costs of the improvements; and (3) the costs are allocated among different classes of users on the basis of some objective measure of use. The measures commonly used are based on the differential costs incurred because of the use of the roads by different types of vehicles, the relative extent of use, the value of

[3] Owen and Dearing, *op. cit.*, Chapter II.

[4] *Ibid.*, pp. 66-83.

the highway service to each user, or some combination of these measures. Which measure or combination to employ is a matter of considerable dispute which is not relevant here since tolls can be set to correspond to almost any system of allocating costs deemed desirable.

Within this framework, the toll road seems to be obviously acceptable. The improvement is made in the first place only because there is thought to be considerable demand for a high design road along the route proposed. Since the bonds are generally secured only by the revenues of the toll road, the users are footing the entire bill. Finally, the toll charge can be adjusted to measure relative use or differential costs with considerably more precision than the usual combination of fuel and registration taxes. Because toll roads fit the various criteria for benefit financing of highways so well, it might be thought that where a proposed toll facility can be demonstrated to be capable of financial success, it automatically has the highest priority.

Impact on Existing Inequities

As has been noted above, the single most important element of the highway finance problem is the malallocation of highway user revenues, that is, the continued prevalence of the "out-of-the-mud" concept of road policy. A major concern with respect to toll roads, then, is their impact on a system of benefit financing under which improvements are related to user demand. If a relatively large number of toll roads were to be constructed, say one in every populous state, let us consider to what extent the departures from benefit financing would be reduced.

Since the main highways carry a share of the traffic out of all proportion to their mileage, it can be safely assumed that the revenue generated by this traffic under a system of user tax rates in the normal range would be in excess of the costs of these roads, even if they were considerably improved. That is, prior to the advent of toll roads, the main rural and urban routes in most states produce a "profit," and this "profit" is employed in benefiting minority user groups by improving roads with lesser traffic densities to standards in excess of user demand. In other words, the vehicle-mile costs of the main roads are substantially less than their receipts, and the vehicle-mile costs of the subsidiary roads are considerably greater than the user receipts produced by these roads. In most states the welfare of the largest number of users would be maximized by improving the main roads to higher standards with minimum increases in the charges paid by users of these roads, that is, by redistributing user tax revenues among road systems.

But the advent of a toll road, if anything, accentuates the inequity and delays its correction. Toll operation of increasing mileages of main roads would make it even more feasible to continue to diffuse gasoline and motor vehicle tax funds among local roads. In effect, by offering substantial improvements in the form of toll roads to users of a few of the very highest density routes—those which would be chosen for tolls—some of the most dramatic evidence and strongest support for reforms benefiting most users of free roads would be removed. Moreover, the increase in the benefits offered users of toll-operated main roads is accompanied by a very

great increase in user charges. In 1950, the average highway-user taxes amounted to $40.85 on a standard, low-price, 3,000 pound passenger car traveling 9,500 miles annually, or about four-tenths of a cent per vehicle-mile.[5] The typical one cent per mile toll represents an increase of nearly 250 per cent. A rougher but more direct comparison is between the typical five cents per gallon gasoline tax and a toll charge: if the vehicle does 15 miles to the gallon, a one cent per mile toll is equivalent to an increase of 15 cents per gallon—300 per cent—in the gasoline tax.

It might be retorted that eventually the toll road authorities will be able to retire their debt, scrap their toll booths, and transform their facilities into free roads, at which time users of the main roads will receive the benefits of the former toll roads at only the costs of maintenance. When this does occur, of course, the existing inequity will be reduced; the situation then will be the same as if the free roads had been constructed at no increase in user taxes paid by users of the main roads. However, the date at which such a millenium will be reached is quite problematical. Even today the apparent financial success of existing toll facilities is stimulating proposals for their extension along routes which are less likely to be self-sustaining—where high design, high cost roads may not be justified by traffic densities as in Pennsylvania and Maine. The experience of agencies operating toll bridges and tunnels, such as the California Toll Bridge Authority, the Triborough Bridge and Tunnel Authority, and the Port of New York Authority, indicates the temptation to refund the debt and continue the tolls on profitable facilities in order to subsidize (potentially or actually) additional facilities of a financially marginal or submarginal nature. Perhaps such moves do benefit users in general, but there is reason to believe that the *specific* users most benefited are not those who pay the toll, and, after all, a major theoretical justification for toll financing is that tolls can achieve a high degree of correlation between those who pay for an improvement and those who benefit from it.[6]

Tolls as Resource Allocators

There are other difficulties in the toll road solution. It must be remembered that financing methods, in highways or in any other area, are merely a way of allocating relatively scarce resources among alternative uses. When we employ a system of benefit financing we are in fact using a variant of the price system; however, the price system will work as a method of allocating resources only if all the competing claims can be tested on a comparable basis. Not all claims for the resources used in highway construction can actually be so tested. Tolls obviously are not feasible for some roads, such as arterial city streets. For other types of construction which may require many of the same materials, no system of user charging is practicable, such as for schools and hospitals. As long as the total demands

[5] R. W. Meadows and S. F. Bielak, "State Road-User and Personal-Property Taxes on Selected Motor Vehicles, 1950," *Public Roads*, XXVI (1950), p. 34.

[6] Compare the position taken by Owen and Dearing, *op. cit.*, Chapter VIII, where they appear to see nothing amiss in imposing toll charges on selected free roads to enhance the total revenues of the state highway agency in order to speed construction of the main roads. Surely expediency can be the only excuse for this departure from a true benefit approach to highway financing.

for resources exceed their supply, the fact that a proposed toll road will be self-supporting is thus not a sufficient reason to give it priority over other improvements which may be as desirable but which are unsuitable for tolls.

Since the end of World War II, and especially at present, total demand for construction materials and labor has exceeded the supply. Within the highway field, various types of improvements can be demonstrated (by estimated traffic volumes) to be demanded by users—for example, main rural highways of the type suitable for toll operation, expressways within cities and through their environs, and many improvements of lower design (and hence lower cost) for use by correspondingly smaller volumes of traffic. If the prospect of successful toll financing meant that all proposed toll projects would be constructed, other types of projects, perhaps even more sorely needed by users, would of necessity be foregone. As a matter of fact, the most urgent needs appear to be for improvements of urban area highway facilities. Increased urbanization and suburbanization have made a bad situation considerably worse; even by the standards and demands of a decade ago, city and metropolitan area arterial street facilities were inadequate. In 1939, the Bureau of Public Roads, in its famous study of six proposed transcontinental toll roads, made this appraisal of the order of priorities in highway needs:

> The needed rebuilding and improvement of the main rural highways is only one element in the larger program of work required for the adequate modernization and extension of the public street and highway facilities of the country. . . . Because of their urgent need to facilitate highway transportation where it is now most seriously hampered, and because of the impetus that through them may be given to needed changes in the central plan of our cities, the construction of trans-city connections of the main rural highways and other express routes into the center of the cities *ranks first* in the list of highway projects worthy of consideration. . . . *Next* to provisions for the safer and more efficient conduct of large traffic streams into and across cities, the new facilities most urgently required are belt-line distribution roads around the larger cities and by-passes around many of the smaller cities and towns.[7] (Italics added.)

Not only are the needs probably most severe in the area of urban arteries, but existing practice with regard to the apportionment of user tax receipts is generally far more unfavorable to the main urban routes than to the main rural routes, those technically suitable for toll financing. Although in populous states such as New York, Illinois, and California, the bulk of highway use and the bulk of user tax collections are in connection with urban traffic, apportionment formulas generally severely limit the extent to which these collections can be expended on urban routes. If the problem were solely one of finance, it might be alleged that toll construction of the main rural roads would free funds for urban routes; in the current situation, however, these funds could not be expended. If successful toll financing were the only criterion of demand, and hence of the location of improvements, the most urgent needs

[7] Bureau of Public Roads, *Toll Roads and Free Roads*, 76th Cong., 1st sess., House Document No. 272 (April 27, 1939), pp. 86, 89-90, 95.

would simply not be met. For example, when a decision must be made between allocating steel for the Ohio Turnpike serving possibly 25,000 vehicles a day, and allocating some of this steel for the Outer Drive extension in Chicago serving as many as 100,000 vehicles daily, the fact of toll financing offers very little in the way of a guide for improvement policy.

Rural Road Standards

Governments not only have to choose between use of highway construction resources for one of several completely separate proposed improvements—that is, urban expressways versus rural limited-access highways—but they must set the standards for any particular project. How limited shall access actually be? What will be the maximum curvature and grade? How wide will the pavement and medial strip (if any) be? Such questions are not solely matters of engineering, for their resolution, under a system of benefit financing, must be based on an attempt to maximize the expression, "total benefits to users minus total costs." An extremely costly road of the highest design will not in all cases yield the maximum benefits. It might be thought that because a toll road of the highest design would be successful, this type of improvement is necessarily the best for users. Nothing could be further from the truth, for in the typical situation where a toll road is under consideration, the alternative is usually not another improvement of somewhat lower design, but an existing road which is completely inadequate on every count. Thus, the probable success of the toll road merely indicates that the toll facility would increase the benefits to users more than it would increase their cost in the form of user charges; a somewhat lower cost road might decrease benefits a little while producing a much smaller increase in highway costs, thus netting a larger increment of benefits.

This is by no means an academic issue. Toll roads, by their nature, must be extremely high cost facilities. To maximize toll receipts, there can be no crossings at grade; the right of way generally must be fenced throughout; etc. It is conceivable that substantial savings in costs and in currently scarce materials might be made simply by eliminating the fencing, permitting minor roads to cross at grade, and constructing the less elaborate grade separations made feasible by the elimination of the requirement that the entrance and exit lanes meet at the one or two points where toll collection facilities are located. Or, perhaps, in the case of the projected Ohio and Indiana Turnpikes, net benefits to users might be enhanced by the expenditure of half as much as would be required for the toll roads on widening sections of existing main routes in the northern portions of the two states, constructing by-passes and belt-line roads, taking steps to limit ribbon development in city-vicinal areas, and utilizing the other half of the funds on urban expressways. In any particular case, the decision as to the appropriate improvement standards is an issue which requires intensive study. The high design toll road may or may not be the best use of the funds and the resources, but there are no grounds for assuming that the toll road is automatically the best answer because it offers some prospect of self-support.

Highway Borrowing and the Business Cycle

At this point it is appropriate to discuss briefly one aspect of the analytical merits of bond financing of highway improvements in general. With respect to the financing of free roads, there is usually a choice between borrowing and current revenue, whereas the true toll road can be financed only by borrowing. It is apparent that benefits to users in general would be maximized by rapid construction of the high priority roads, financed if necessary by borrowing. One of the early proponents of a rigorous application of the benefit theory to highway financing stated it thus:

> A final corollary of the commercial conception of roads in the matter of financing is that it suggests a considerable dependence upon bond issues in the first instance. If road development is economically justified, it should be accomplished as soon as possible, but its cost may reasonably be spread over a fairly long period, the length depending upon the character of the improvements.[8]

The key phrase in this quotation is "as soon as possible." Will borrowing for highways in situations such as the present, when there is already considerable strain upon limited resources, produce any more highways? Clearly, the answer is in the negative, and the effect of the borrowing can only be an expansion of the money supply and an increase in inflationary pressures. Even if there were a free market (rather than allocations) in highway construction materials, borrowing under boom conditions might not produce more highways. Rather, it might bid up the prices of construction, labor, and materials—in attempts to divert them from nonhighway uses—to the point where the increased costs of the proposed improvements would threaten to exceed the benefits which they would confer on users. It is quite clear that state and local governments can tap the bond market far more readily at present, with fairly low interest rates prevailing and with the great advantages offered by tax exemption in a period of high tax rates, than during a major depression like that of the thirties. As a matter of fact, during the thirties borrowing for highways dropped off sharply.[9]

Because bonds can be sold so easily during a boom period, and because once they are sold interest begins to accumulate, thereby creating pressure for early construction of the interest bearing facilities, increased bond financing cannot help but stimulate highway expenditures during a period when this stimulation does little other than intensify inflationary pressures. Thus, it seems clear to this writer that increased bond financing of highways will result in greater "fiscal perversity" on the part of state and local governments. In other words, by encouraging them to increase outlays and to borrow in boom periods, and to curtail their outlays in times of depression, increased bond financing of highways will strengthen the existing tendency of state and local governments to act in ways which aggravate the swings of the business cycle. This impact must be thrown into the hopper for any computation of the over-all cost benefit ratio of a proposed

[8] Shorey Peterson, "Highway Policy on a Commercial Basis," *Quarterly Journal of Economics*, XLVI (1932), p. 441 (footnote).

[9] See, for partial evidence, Bureau of Public Roads, *Highway Statistics, Summary to 1945* (Washington: Government Printing Office, 1947), pp. 48-53.

element of highway policy, since highway users, like everyone else, are greatly harmed by wide swings of the business cycle. It is easy to conceive of circumstances in which the net increase in the violence of the fluctuations in economic activity, due to a cyclically perverse highway improvement policy, would damage users far more than would the postponement of some expenditures during an inflationary period. In short, one of the major political advantages of toll roads—the facilitation of voter acceptance of proposed bond issues—may in reality be one of their major economic *disadvantages.*

Actual Extent of Toll Road Self-Support

Up to this point in the discussion, it has been assumed, as the proponents of toll financing claim, that the opportunities for financially successful toll operation of main highways are quite extensive. This claim deserves examination. Two methods may be employed: (1) an evaluation of the experience of the half dozen major toll roads which have been in operation long enough to shed some light on the problem; and (2) an appraisal of the conclusions of the only nationwide investigation of toll road financial feasibility, the 1939 study of the Bureau of Public Roads.

Pennsylvania Turnpike. The Pennsylvania Turnpike, opened to traffic in October, 1940, is the engineering prototype for more recent toll road construction, but it is not the financial prototype, as Owen and Dearing indicate.[10] The financial success of the original 160-mile section has not been that of an ordinary self-supporting facility, but of one constructed under highly advantageous conditions and favored with a number of subsidies. The subsidies include a Public Works Administration grant of $29,250,000, equal to more than 40 per cent of the total outlay on the original section of the road; R.F.C. purchase of the Commission's revenue bonds at a time when private flotation would have been extremely difficult; and the purchase of an abandoned railroad right-of-way, including the tunnels, for a price which was only a fraction of what the reproduction costs would have been. Moreover, " The Commission enjoys the advantage of paying off a low-cost prewar investment with toll rates at a level particularly attractive in a period of postwar inflation." [11] Finally, the terrain is very favorable to the success of the toll road; the elimination of the extreme grades and curvature usually found in mountainous regions makes the turnpike very attractive, especially for heavy trucks. Few other proposed toll roads have this natural advantage.

On the other hand, the eastern and western extensions of the turnpike have been constructed at the high postwar cost levels, without any direct subsidies. The first year of operation of the eastern extension has indicated that this project could have been self-supporting, at least in generally prosperous periods. But it must be kept in mind that the road serves a relatively densely populated territory and that it is a " natural " route for relatively heavy truck traffic, conditions that do not apply equally to all proposed toll roads.

Maine Turnpike. This 44-mile, road, opened to traffic in 1947, was constructed without subsidy of any kind,

[10] *Op. cit.*, pp. 97-99.

[11] *Ibid.*, p. 97.

and has been financially successful to date despite obstacles of various kinds. One has been the extreme seasonality of its use; another is the relatively short distance between toll gates which increases toll collection costs sharply. As a matter of fact, the Turnpike Authority found it necessary to raise tolls, from 50 to 60 cents for a full length passenger car trip, in May, 1949, and has since attempted to raise fares again, this time to 75 cents.[12] All in all, the Maine turnpike experience demonstrates the possibility of self-support on an unsubsidized basis for certain roads, although probably at a 1.5 cent per mile fare, rather than the one cent fare applicable to the Pennsylvania road.[13]

New Hampshire Turnpike. Completed in 1950, the New Hampshire Turnpike is only a 15-mile road across the southeastern edge of the state, between Maine and Massachusetts. It is now and probably will continue to be self-supporting by a wide margin. Since the turnpike serves such a heavy volume of interstate traffic, especially of trips originating and terminating outside the state, this is probably a case in which it can be demonstrated with relative ease that the toll principle maximizes the benefits of both out-of-state users and resident vehicle-owners who by and large do not use the facility and do not pay for its support.

Connecticut and Westchester County Parkways. These parkways are not "pure" toll roads in two senses: (1) they have been heavily subsidized; and (2) they do not have toll gates at all interchanges, but merely have toll plazas (of the type used on toll bridges) strategically located at several points where avoidance is inconvenient. The Merritt Parkway (38 miles long, opened in 1940) was constructed with funds provided by a $15 million bond issue serviced from regular user tax revenues, a $6 million grant from user tax funds, and a $400,000 P.W.A. grant. The only costs met from toll receipts are direct toll collection costs. The net receipts have been used for the progressive extension of the Wilbur Cross Parkway, now 29 miles long, and have amounted to only about 30 per cent of the total construction costs. The tolls —two 10-cent toll stations over the entire length—will be continued to provide funds for the further extension of the parkway system and eventually will be used to service outstanding debt for the two parkways. It can be seen that the tolls are not designed for self-support, but rather to provide some additional funds for highway construction without being overly objectionable to either long or short-haul traffic and to tax out-of-state vehicles which do not need to buy gasoline in the state (because of its small size), but do use its roads extensively.

The Westchester County Parkways, which also employ 10-cent toll plazas at strategic locations, were originally constructed with federal aid as free roads. The tolls were imposed in part as retaliatory moves in response to the tolls collected on the Connecticut Parkways, and in part in order to tax New York City vehicle operators for their use of Westchester roads built partially with funds collected from local property taxes. The only debt service requirement is the servicing of the $2,500,000 bond issue which provided

[12] *Engineering News-Record*, August 30, 1951, p. 17.

[13] The new New Jersey turnpike is operating with a full length fare of about 1.5 cents per mile.

funds to reimburse the federal government for its contribution to the construction costs, since federal aid projects are required to be toll-free. The other construction costs are not amortized, and the county nets a substantial amount annually. Thus neither these nor the Connecticut roads can be taken as indicators of the potential for toll road self-support. In fact, aside from the Maine experience, existing toll facilities shed little light on prospects for other proposed toll roads.

Other important toll roads. The 118-mile New Jersey Turnpike, which cuts across the state from the vicinity of the George Washington Bridge to New York City to the approaches to the new Delaware Memorial Bridge to Wilmington, has recently been opened. This road is the highest cost toll facility now constructed or in prospect, largely because of the high costs of right-of-way acquisition in the densely populated areas of northern New Jersey. There is every prospect that the road will be as successful as its Pennsylvania prototype, for the traffic volumes along parallel roads, especially truck traffic, are very heavy. As we will see shortly, even the Bureau of Public Roads study, which was generally bearish on the prospect for toll road self-support, indicated that a toll road along this route would probably be a financial success.

The most ambitious toll road project to date is the New York State Thruway, a 400-odd mile road whose main routes will be from Buffalo to Albany to New York. The Thruway is being constructed at a modest rate, financed by loans from the state highway agency. The pace of construction probably will be greatly accelerated after the expected sale of Thruway bonds in the near future.

Two smaller toll projects were under construction when this article was written: (1) the 17-mile Denver to Boulder Colorado Turnpike; and (2) the Oklahoma City to Tulsa Oklahoma Turnpike.

Bureau of Public Roads study. Section 13 of the Federal Aid Highway Act of 1938 directed the Chief of the Bureau of Public Roads to investigate the feasibility of the construction and toll operation of three east-west and three north-south superhighways across the United States. The Bureau surveyed routes totaling 14,336 miles, estimating the total construction cost at about $2.9 billion.[14] All cost and revenue estimates were prepared on the basis of the 75 individual sections, averaging 191 miles in length, into which the proposed highways were divided. Average annual costs for the first 15 years of operation of the system were estimated on the basis of a 30-year bond issue bearing interest at the rate of 2.6 per cent, financing arrangements strikingly similar to those employed in connection with recent toll roads. All other costs —construction, operation, and maintenance—were of course based on the low price levels then prevailing, applied to high design highways.

Estimates of toll revenues were based on assumed tolls of one cent per mile for passenger automobiles and 3.5 cents for trucks and buses (exactly those planned for the New York State Thruway).[15] Traffic volumes were estimated by utilizing actual traffic counts for the parallel free roads in 1937, and

[14] *Toll Roads and Free Roads*, p. 1.

[15] *Ibid.*, p. 2.

reducing this traffic, first, by those short-trip vehicles excluded because of the limited-access nature of the roads (a substantial portion, since most motor vehicle trips are short), and second, by those vehicles excluded by unwillingness to pay the toll.[16] The resultant figures were then inflated by a predicted trend in total vehicle miles of travel from 1937 to 1960, with the trend figure augmented for certain factors unique to such highways.[17] The trend prediction made in the study has proved to be surprisingly accurate: the indicated index figure (1937=100) for 1948 was 144, and the actual figure turned out to be 148. For 1960, traffic about 15 per cent greater than that predicted could be safely expected. On the other hand, construction costs for highways in general just about doubled in the decade from 1937 to 1948, and increased even more than that for high design roads including a large mileage of major structures.[18] The design standards adopted in the Bureau's study were in some respects higher than those for existing and planned toll highways (for example, curvature and sight distances). On balance, however, they were lower than those typical, since four-lane divided pavement amounted to only about 15 per cent of the total mileage of the system and was provided only on the sections where 1960 traffic was estimated to be in excess of 1,500 vehicles per day.[19]

Thus, in over-all effect, with higher cost indices than estimated and higher design standards, conditions today would seem considerably less advantageous in terms of the possibility of self-support for toll roads. Even under the 1939 estimates, only two sections, totaling 172 miles in the vicinity of New York City, were found to be capable of full self-support (annual revenues equal to or greater than annual costs, for each section), sections amounting to another 666 miles were 92 to 83 per cent self-supporting, and sections amounting to more than 10,000 miles were less than 50 per cent self-supporting.[20] The sections having the highest ratios of revenues to costs were, with two exceptions, on the route between Washington, D. C., and Portland, Maine (through Baltimore, Philadelphia, New York, New Haven, and Boston). It is interesting to note that most of the mileage of four-lane highways for which the ratio was high corresponds to already existing or planned toll highways.

As Owen and Dearing demonstrate, the Bureau's estimates of willingness to pay tolls, based as they were on the low levels of income prevailing in the 1930's, are too low and produced some overly conservative estimates of total traffic—notably for the sections corresponding to the Pennsylvania and Maine Turnpikes.[21] Nevertheless, the Bureau's evidence suggests the possibility that there are not many unexploited opportunities for successful toll roads. This evidence, combined with the very limited extent of full self-support on

[16] *Ibid.*, pp. 20-24.

[17] *Ibid.*, pp. 33-34.

[18] Bureau of Public Roads, *Highway Statistics, 1948* (Washington: Government Printing Office, 1950), p. 121.

[19] *Toll Roads and Free Roads*, pp. 34-41, 48.

[20] *Ibid.*, pp. 82-83.

[21] Owen & Dearing, *op. cit.*, pp. 141-142.

the part of existing toll roads, indicates that the financial prospects of proposed toll roads, especially those in less densely populated areas, should be subjected to the most careful scrutiny. It is quite possible that popular enthusiasm for the toll road "solution" will encourage state governments to undertake toll projects which not only fail to represent the optimum use of resources and the optimum system of user financing, but also are submarginal from the standpoint of the prospects for financial success. Should this occur on a large scale, the consequences may be sadly reminiscent of those flowing from the early nineteenth century boom in "self-liquidating" transportation improvements.

Conclusion

There can be no doubt that toll roads capable of financial self-support, along limited mileages of main rural routes, provide an expedient solution to some elements of the critical highway problem. What is doubtful is whether the toll method provides the *best* solution, that is, the allocation of resources among different kinds of highway improvements and the over-all system of highway-user charges that will *maximize* the net benefits to users. If all proposed toll roads which present a prospect of financial success were constructed in the immediate future, the obviousness of the urgent need for reallocation of user tax revenues among free road systems would be reduced, and existing inequities would be aggravated. Many urban highway improvements, some of which are of very highest priority (that is, would have the greatest number of vehicle miles of traffic per dollar invested), would have to be postponed, perhaps indefinitely. Furthermore, in some cases main rural roads of somewhat lower standards might be a better buy for users. Finally, the increase in borrowing for highway construction which is associated with toll financing may, through its cycle-aggravating effects, offset the advantages to users of somewhat more rapid improvement of some of the main roads.

In summary, the fact that a proposed toll road may be self-supporting provides no automatic justification for its construction in boom periods. What is required in each case is an analysis of the costs and benefits vis-à-vis the costs and benefits from alternative highway policies. Although there have been cases and undoubtedly will be other instances in which the toll road solution is the best one, an indiscriminate toll road boom, far from offering a panacea, may in fact reduce the net benefits accruing to the largest groups of users.

A FISCAL PROGRAM FOR HIGH-LEVEL MOBILIZATION

ELMER D. FAGAN *

IN THE FORMULATION of this fiscal program for high-level mobilization, chief consideration is given to the questions which follow:

(1) Is it possible to prevent inflation during high-level mobilization by fiscal measures alone?

(2) Which fiscal measures or combination of fiscal measures would be most effective in the mitigation of inflationary pressures, and, at the same time, contribute most toward the attainment of
   (a) desirable resource allocation,
   (b) equitable distribution of fiscal burdens, and
   (c) postmobilization stability?

The answer to the first of these questions is "no." At high-level mobilization the huge expenditures in the government sector would be accompanied by short supply in the civilian sector. Inflation would follow unless an increase in total spending (government plus private) could be prevented. An increase in total spending could be prevented only by a decrease in private spending of a magnitude equal to the increase in government spending.

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It is unreasonable to expect that this equality could be produced by fiscal measures alone. There are two main reasons for this belief, namely, (1) the multiplier effect of government spending even under a balanced budget, and (2) the stupendous sum of liquid assets which, in addition to the swollen stream of current personal income, supplies the funds for the maintenance of private spending.[1]

It is highly improbable that a balanced budget could be maintained at high-level mobilization. But even if this could be done, private spending would not be decreased by an amount equal to the increase in government spending. The extraction of a given sum by taxation would not decrease private spending by an equal amount unless the marginal propensity to spend of taxpayers were equal to *one*. Now the distribution of personal income in the United States is such that an amount of revenue adequate for the financing of high-level mobilization

[1] For a discussion of the nature and probable magnitude of inflationary pressures during a full-scale mobilization of our economy, see E. S. Shaw and L. Tarshis, "A Program for Economic Mobilization," *American Economic Review*, Vol. XLI (March, 1951), pp. 30-50; and T. Scitovsky, E. S. Shaw, and L. Tarshis, *Mobilizing Resources for War* (New York: 1951).

could not be raised without the extraction of revenue from taxpayers who would reduce their spending in the main by somewhat less than the amount of their taxes. That is to say, the marginal propensity to spend of taxpayers generally would be less than *one*. Since the government would spend the entire amount of tax revenue, total spending would be increased as a result of the combined effect of the extraction and spending of the tax revenue. In a full employment economy this increase in total spending would generate additional *dollar income* without, of course, generating additional *real income* of an appreciable amount. If the marginal propensity to spend of the recipients of the government expenditures were exactly equal to the marginal propensity to spend of the taxpayers, the increase in *dollar income* would be equal in amount to the tax revenue extracted.[2]

The maintenance of a balanced budget at high-level mobilization would require tax rates well in excess of the highest rates which were used in either the United States or the United Kingdom during World War II.[3] These rates, particularly those levied by the United Kingdom, are probably as high, if not higher, than any which it would be politically possible or economically desirable to impose in this country during either mobilization or all-out war.

The preceding discussion leads to two conclusions: (1) that during high-level mobilization inflation could not be prevented by fiscal measures alone; and (2) that a balanced budget could not be maintained and deficit financing would therefore be inevitable.

The existence of over $250 billion of liquid assets, of which approximately 73 per cent is held by individuals, greatly decreases the effectiveness of conventional fiscal measures as controls over the volume of private spending.[4] For example, if current personal income were drained off by income taxation, liquid assets would rush in to fill the vacuum. If fiscal measures are to mitigate inflationary pressures they must greatly reduce the volume of liquid assets either by taxation or by government borrowing of a form which would force liquid assets into illiquid government securities.

A capital levy, a sales tax, and a spendings tax appear to be the principal forms of taxation which would be effective in reducing or discouraging the private spending of liquid assets.[5] The economic, political, and ethical objections to the imposition of a capital levy during a period of mobilization are obvious and call for no further discussion in this brief paper. The exclusion of the capital levy leaves the sales tax, the spendings tax, and government borrowing as the remaining fiscal means for the reduction of private spending through the reduction of the volume of liquid assets. And while these three

[2] An explanation of this fiscal relationship is given by T. Haavelmo, "Multiplier Effects of a Balanced Budget," *Econometrica*, Vol. 13 (Oct., 1945), pp. 311-18.

[3] See Scitovsky, Shaw, and Tarshis, *op. cit.*, p. 80.

[4] *Federal Reserve Bulletin*, July, 1951, p. 807.

[5] A program of death and gift taxation of the type suggested by the late Professor Henry Simons in his *Personal Income Taxation*, Chap. VI, could be made much more helpful than our present method as a means of decreasing private demand through its effect upon wealth. It seems highly improbable, however, that really significant changes will be made in our existing method during the present mobilization program.

measures might be expected to reduce appreciably this source of inflationary pressure, they could not be expected to eliminate it.

Since it has been shown above that it is unreasonable to expect inflation to be *prevented* by fiscal policy alone, our second question logically arises: Which fiscal measures or combination of fiscal measures would be most effective in the *mitigation* of inflationary pressures and, at the same time, contribute most toward the attainment of (1) desirable resource allocation, (2) equitable distribution of fiscal burdens, and (3) postmobilization stability?

The effectiveness of fiscal measures as means to the ends which were set forth in the preceding paragraph depends primarily upon the ability of these measures to prevent an increase in total spending (private plus government). The inevitable increase in government spending could be checked to some extent by (1) keeping nondefense spending to a reasonable minimum at all levels of government, (2) streamlining governmental agencies, and (3) the adoption of the most efficient methods of military procurement.

Private spending must be reduced by fiscal measures which will effectively decrease the two main sources of private demand—current personal income and liquid assets.

The first of these sources, current personal income, can be reduced most effectively by a personal net income tax. Since this tax is not likely to be shifted, it affords the highest probability of securing the most desirable quantitative and qualitative reduction in private spending, particularly if its rate structure is framed with an eye on such statistical data as total personal income, marginal propensity to consume, and spending patterns in different income groups. If sole reliance for the reduction of current personal income were placed upon the personal net income tax, its rates would have to be stiff indeed in the lower and middle income brackets since the bulk of personal income is received and spent by consumer units in these brackets.

This necessity points out a significant limitation to the personal net income tax as a means of closing the inflationary gap. Rates which would be appropriate for this purpose would have to violate the principle of ability-to-pay. A truly anti-inflationary rate schedule would result in grave inequalities in consumption out of current personal income. These inequalities would be accentuated by the ability of many consumers, especially those in the high income brackets, to maintain consumption out of liquid assets. In a study which is based upon realistic assumptions and characterized by careful quantitative projections, Professors Shaw and Tarshis have estimated that even after taxes at World War II levels, households in the top three or four deciles of the income distribution would be capable of taking from the market the entire output of consumption goods which could be produced under conditions of high-level mobilization without drawing on liquid asset accumulations.[6]

A truly anti-inflationary rate schedule on the demand side would most certainly lessen incentive to produce, and thereby cause a decrease in supply. Excessively high rates in the lower and

[6] Shaw and Tarshis, *op. cit.*, p. 33.

middle income brackets would probably give rise to successful demands for wage increases, and thereby set off an inflationary spiral.

From the preceding discussion, it is clear that the personal net income tax *alone* could not be made to produce the desirable quantitative and qualitative decrease in private spending during high-level mobilization. Its effectiveness as an anti-inflationary weapon could be increased significantly, however, and without the sacrifice of either its ethical or economic merits.

The equity of the personal net income tax at any given revenue yield could be increased by the adoption of the following: (1) the averaging of net income over a reasonable period, say five years; (2) the treatment of capital gains (and losses) as ordinary income (and losses), with the following exception: gains (and losses) from the sale of capital assets held for longer than one year would be measured as *value* increments (or decrements), not as price *increments* (or decrements);[7] (3) the elimination of the double taxation of corporate dividends; and (4) the use of more effective means of closing loopholes through which an appreciable amount of personal net income now escapes taxation.

In addition, the repressive effect of the personal net income tax at any given revenue yield could be decreased by the substitution of totality progression for bracket progression.[8] The latter, unlike the former, focuses the attention of the taxpayer on marginal income and marginal tax rates rather than upon average income and average tax rates. If totality progression were combined with the averaging of net income over a reasonable period of years, the relation between tax burden and the supply of effort or risk-taking or both would become much less direct than under our present form of income taxation.[9]

Since great and rapid economic changes will probably take place as mobilization proceeds from low to high levels, the flexibility of tax rates would increase greatly the effectiveness of the personal net income tax as an anti-inflationary weapon and also as a means to the attainment of more effective resource allocation and greater equality in private consumption financed out of current income.

In earlier sections of this paper it has been shown that the ethical and economic merits of the personal net income tax would be sacrificed to an appreciable degree if it were expected to carry too much of the fiscal burden. It is primarily for the purpose of decreasing the burden of the personal net

[7] Value increments are price increments which have been adjusted for changes in the cost of living index that might have occurred during the period through which the capital assets were held. In other words, price increments are increments caused by a decrease in the value of money. Value increments represent an increase in the relative value of specific assets.

[8] The writer is aware of the "notch problem" involved in totality progression. It is clear, however, that this problem could be solved by the construction of an appropriate rate schedule.

The distinction between totality progression and bracket progression is the same as the distinction between average rates, *i.e.*, $\frac{\text{total taxes}}{\text{total income}}$ and marginal rates, *i.e.*, $\frac{\Delta \text{ taxes}}{\Delta \text{ income}}$ at each several point on the income scale.

[9] The importance of this point has been noted by Ursula K. Hicks, *Public Finance* (London: 1947), pp. 214-17.

income tax that the corporate net income tax should be given an important role in fiscal policy during high-level mobilization.

The effectiveness of either a normal corporate net income tax or an excess profits tax as a means of decreasing private demand is limited to some extent because the bulk of dividends is received by individuals with relatively large incomes, and because the marginal propensity to consume of such individuals is relatively low.[10] This would be true, of course, under the assumption that the corporate net income tax were not shifted. And the weight of contemporary evidence and opinion appears to support the theory that, in the main, the direct financial burden of the corporate net income tax is on the owners of the corporation.

Although the marginal propensity to consume of the recipients of corporate net income is relatively low, it is well above zero. This fact, together with the huge total of dividends received, makes it reasonable to believe that the extraction of revenue by a corporate net income tax at a reasonably high rate, say a proportional rate of 50 per cent, would still drain off an appreciable amount of funds from the consumer-goods market.[11]

Since the corporate net income tax is an impersonal tax, its burden falls upon real persons without regard to their ability to pay. This basic ethical defect is not mitigated by the use of progressive rates in corporate net income taxation. In fact, progressive rates serve only to penalize efficiency or bigness or both.[12] The effectiveness of the corporate net income tax as a supplement to personal net income taxation could be maximized by the adoption of the following suggestions: (1) in the calculation of corporate net income for purposes of taxation, the government should permit, in addition to bond interest and other legitimate costs of production, the deduction of dividends which are taxable under the personal net income tax, and (2) the corporation should withhold the personal net income taxes on bond interest and dividends, at one of the lower personal net income tax rates.

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[10] This brief article is not the place to present a comprehensive case for the exclusion of an excess profits tax in a fiscal program for high-level mobilization. In brief, this form of taxation has been excluded for the following reasons: (1) its administrative difficulties, particularly those associated with the problem of the satisfactory determination of "normal profits," (2) its repressive effect on production, (3) its unequal impact and pressure on different firms, and (4) the uncertainty of our knowledge concerning the incidence of corporate income taxation *at very high rates*.

[11] Even under a prolonged period of high-level mobilization it appears improbable that a change should occur in the income-consumption ratio of a magnitude which would make this position untenable.

It seems unlikely that a corporate net income tax at the proportional rate of 50 per cent would play an important role either as a deflationary or inflationary force through its *direct* effect upon corporations' demand for investment goods. In the program which is proposed in this paper, fiscal policy would attempt to influence corporate and noncorporate demand for investment goods only *indirectly* through the effect of such policy on the demand for consumer goods. This does not imply that direct nonfiscal governmental control of demand might not be necessary in the case of critical shortages of investment goods vital to the mobilization program.

[12] A strong case could be made, however, for the taxation of small corporations at lower rates than large corporations. This matter received careful consideration in the framing of the bill which was passed by the House of Representatives, but rejected by the Senate, in connection with the passage of the Undistributed Profits Tax of 1936. The House Ways and Means Committee and the Senate Finance Committee *Hearings* on this tax contain extensive and valuable information on the question of rate discrimination between small and large corporations, etc.

The adoption of the first of these suggestions would eliminate the double taxation of corporate dividends. This would not only increase the equity of the personal net income tax but would also tend to stimulate production and improve corporate financial structure.[13] The second suggestion, if adopted, would increase the effectiveness of the personal net income tax as an anti-inflationary measure by the elimination of the present time lag between the receipt of an appreciable amount of dividend and bond-interest income and the extraction of personal net income taxes therefrom.

The taxation of corporate net income at a fairly high proportional rate, say 50 per cent, probably would be high enough to help check the demand for wage increases by certain labor leaders who, because of their failure to distinguish between the corporation *per se* and the owners of the corporation, insist that the corporate profits melon be shared with the government in the form of taxes and/or with workers in the form of higher wages. It is admitted, however, that the 50 per cent rate might be less effective in this respect than the present combined normal and excess profits taxes on corporations.

Sales taxation, unlike the taxation of net income, either personal or corporate, restricts private spending whether the spending is financed from current income or wealth (liquid assets, etc.). This advantage of sales taxation is more than offset, however, by its disadvantage if the tax is *general*. The extraction of sales tax revenue would, it is true, restrict *aggregate* consumer demand. It is unlikely, however, that it would sufficiently reduce the demand for certain basic necessities, important items in the cost of living, to offset the tax-induced increases in their supply-prices. Therefore, the prices of such goods would probably rise. This increase in the price of necessities could easily generate a wage-price spiral. And if the *extraction* of the sales tax revenue failed to produce a wage-price spiral, the combined effect of the *extraction* and the *expenditure* of the sales tax revenue would be an upward pressure on the general price level.[14]

This inflationary feature is not the only objectionable characteristic of the *general* sales tax. This tax also violates the principle of ability-to-pay. It is a familiar fact that a general sales tax with a proportional rate on sales is, nevertheless, highly regressive with respect to net income.

The most objectionable feature of the *general* sales tax, namely its regressivity, could be eliminated, of course, by the exemption of food. This exemption would have the effect of making a flat-rate ad valorem sales tax proportional with respect to net income as well as to sales over a very wide range of income. The exemption of food would also reduce the danger of tax induced inflation.

In the absence of a progressive spendings tax, a strong case can be made for the adoption of a sales tax (food exempted) during high-level mobiliza-

[13] Under our present practice of the double taxation of corporate dividends there is a tax bias in favor of bond financing vs. stock financing. This makes for larger corporate indebtedness and larger fixed costs in terms of bond interest. These are factors which increase corporate financial stringency and distress in bad times. This point has been stressed by George O. May in Crum, Fennelly, and Seltzer, *Fiscal Planning for Total War*, p. 204.

[14] The reasoning upon which this statement is based has been presented above, pp. 120 and 121.

tion.[15] If such a tax were adopted by the federal government, it would seem wise, in the interest of administrative simplicity, to levy the tax on manufacturers rather than on either retailers or wholesalers.[16]

Either with or without a progressive spendings tax there appears to be a place for a selective progressive ad valorem sales tax on consumer goods, the production of which requires manpower and materials of a type badly needed for the production of defense goods. Such a tax would be particularly helpful in the early stages of mobilization when it is so highly important to divert resources from the production of civilian goods to the production of military goods. The need for this form of taxation would be lessened, but not entirely eliminated, by the use of direct controls for the attainment of appropriate resource allocation. The tax would increase the effectiveness of the direct controls unless they *prohibited* sales in the civilian sector.

The spendings tax, like the sales tax, tends to check private spending whether the spending is financed from current income or from wealth. The spendings tax is, therefore, a particularly effective means of mitigating the inflationary pressure which stems from the private spending of liquid assets.

In several respects, the spendings tax is especially attractive in a period of high-level mobilization. Its attractive features are the following:

(1) The spendings tax would discourage *directly* the inflationary act of private spending for consumer goods and services.

(2) Since the tax would be a personal tax measured by expenditure for consumption, basic exemptions could be established which would have regard for the domestic circumstances of the taxpayer and which would prevent the standard of living being reduced to a level which would impair productive efficiency.

(3) Consumer expenditures above the established exemptions would be taxed at progressive rates. This progressivity would increase significantly the effectiveness of the spendings tax in restricting consumer spending by the wealthy.

(4) Unlike the sales tax, the spendings tax would not increase supply-prices. There would be no reason, therefore, why the latter should set off an inflationary wage-price spiral or exert pressure on price ceilings in the event of the existence of such price controls.

(5) Since the spendings tax would cover spending for both consumer goods and *services*, it would reach as large an amount of consumer spending as a general retail sales tax, and a considerably larger amount than a retail sales tax with food exempted.

(6) The spendings tax could be administered in a manner that would eliminate the objectionable time lag which has featured

[15] The characteristics of a progressive spendings tax which establish its superiority over either a general sales tax or a sales tax with food exempted are presented in the next column.

[16] The taxation of sales at retail would be preferable if all or nearly all the states levied retail sales taxes and if the states were willing to cooperate with the federal government in the collection of sales tax revenue.

certain of the earlier spendings tax proposals.[17]

The merits of the progressive spendings tax which have been listed above must surely insure it an important role in a period of high-level mobilization—particularly in an economy in which private demand is strongly supported by a gigantic accumulation of liquid assets. In such an economy, the favorable features of the spendings tax would be of a number and quality which would clearly establish its superiority over either a general sales tax or a sales tax with food exempted.

In an early section of this paper it was concluded that deficit financing would be inevitable at high-level mobilization. Even if deficit financing were not inevitable, it would be desirable if it were necessary to prevent taxation at levels which would produce: (1) undue discouragement to incentives to produce, (2) tax evasion, (3) encouragement to dissaving, and (4) the accentuation of inequalities in consumption as between low and medium income receivers on the one hand, and large income receivers who hold the bulk of liquid assets, on the other.

This critical level of taxation would be reached in the face of mounting net savings of households and business. These net savings in the private sector would correspond, of course, to the deficit in the government sector.[18]

It has been estimated that total net savings of the individuals and business sectors of $467 billion, and a corresponding government deficit would accumulate for the first six years of a high-level mobilization program, under federal personal net income tax rates of 1944 and a 65 per cent corporation income tax.[19] When either of these sums is added to the current stock of liquid assets of over $250 billion, the inflationary potentialities become frightening.

These figures make it crystal clear that government borrowing must transform a substantial volume of personal liquid assets into illiquid government securities. And the experience of the Treasury's borrowing operations during World Wars I and II, leads to the conclusion that an adequate transformation from liquid assets into illiquid government securities could not be effected by voluntary loans alone. Clearly, compulsory loans would be required.

Compulsory loans would be distinctly preferable to voluntary loans in a period of high-level mobilization for the following reasons:

(1) Since volition would be on the side of the government in the case of compulsory loans, it would be possible for the government to extract a larger amount of purchasing power

[17] For two excellent discussions of the spendings tax which include, among other significant points, suggestions for putting a spendings tax on a pay-as-you-go basis, see T. Scitovsky, "The Political Economy of Consumers' Rationing," *Review of Economic Statistics*, Aug., 1942; and A. G. Buehler, "Taxing Consumer Spending," *Bulletin of the National Tax Association*, XXVIII (Jan., 1943), pp. 123-28.

[18] For the reader to whom the terminology might be unfamiliar, it should be helpful to explain that "net savings" are receipts which are not respent during the fiscal period under consideration. Since total receipts equal total expenditures for the economy as a whole (private sector plus government sector), it follows that an excess of receipts over expenditures, *i.e.*, "net savings," in the private sector must be offset by an equal excess of expenditures over receipts, *i.e.*, "deficit," in the government sector.

[19] These data are from Scitovsky, Shaw, and Tarshis, *op. cit.*, pp. 83-84.

from private individuals, as distinct from banks and "big investors."

Heavy reliance on borrowing from the banks would be highly probable under voluntary loans. Since bank loans would not reduce private spending, the expenditure of the borrowed funds by the government would be highly inflationary.

(2) The probability of securing an appropriate quantitative and qualitative decrease in private demand would be much higher in the case of a wisely planned program of compulsory loans.

(3) A system of compulsory loans could be combined effectively with personal net income taxation.

(4) Compulsory loans would not give rise to undesirable social pressures which tend to arise under large programs of "voluntary" borrowing.[20]

(5) Compulsory loans would make possible more effective government debt management because:

(a) The type of government security could be dictated by such considerations as illiquidity, service cost, and flexibility of redemption; and

(b) Bond quotas could be assigned with an eye to the promotion of economic stability by debt transfer payments both during and after the mobilization and/or war period.

[20] For a discussion of the social pressures which were applied in the case of "voluntary" loans during World War I, see N. R. Whitney, *Sale of War Bonds in Iowa* (esp. Chap. V); and "Borrowing with a Club," *New Republic*, March 29, 1919.

Under a system of compulsory loans, the government could raise the bulk of its loan revenue through the sale of purchasing power bonds and annuities to private individuals. The purchasing power bonds would constitute the major form of government borrowing. In my opinion, these bonds should, be: (1) nonnegotiable; (2) ineligible permanently for bank portfolios; (3) redeemable on call by the Treasury, or upon the request of bondholders after a period of, say, ten years in case of Series X bonds and of, say, 15 years in the case of Series Y, etc., and, in addition, upon the request of bondholders at any time after date of issue upon proof that such privilege was necessary to prevent undue hardship; (4) redemption price would be issue price adjusted for changes in the cost of living; and (5) interest rate would be nominal, or perhaps zero.

Such bonds should prove particularly attractive in a period in which rising prices had been experienced and in which further and significant price increases were expected. Other advantages of purchasing power bonds have been set forth by my colleagues Professors Edward S. Shaw and Lorie Tarshis, who write:

> The bulk of [purchasing power bonds] would be allocated regressively by income level and would hence be useful in limiting the wartime increase in wealth inequalities. In the postwar period they would tend to restrain both inflation and deflation. During inflation they would appreciate in money terms and limit dissaving. In deflation they would depreciate in money terms and encourage dissaving.[21]

An adequate treatment of the problem of debt management is beyond the

[21] Shaw and Tarshis, *op. cit.*, pp. 45-46.

scope of the present paper. No extended argument is necessary, however, to support the contention that the outstanding federal debt should be made illiquid. Higher interest rates to holders of government bonds would be a necessary cost of effecting this objective. The economic advantages of illiquidity would outweigh by far, however, the increase in interest payments by the government.

In the preceding pages various forms of revenue were examined in an attempt to determine which fiscal measures or combination of fiscal measures would be most effective in the mitigation of inflationary pressures, and at the same time contribute most toward the attainment of (1) desirable resource allocation, (2) equitable distribution of fiscal burdens, and (3) postmobilization stability. My conclusion is the following:

The forms of revenue which would prove the most effective means to the desired ends would be those which would supplement most effectively the *general* economic system of mobilization which was adopted, for example, (1) the disequilibrium system, (2) the pay-as-you-go system, (3) expenditure rationing, etc. But, under *any* general economic system of mobilization, the most effective and economically desirable fiscal program for high-level mobilization would be based primarily upon: (1) the personal net income tax, (2) a progressive spendings tax (spendings on consumption goods and services), (3) the corporate net income tax, and (4) compulsory loans. The relative importance and principal functions of each of these forms of revenue would vary somewhat, of course, under the different general economic systems of mobilization.

CATEGORICAL INEQUALITIES IN ASSESSMENT IN NEBRASKA, 1930-1950

E. B. SCHMIDT *

I

INTRODUCTION

SPECIALIZATION as a rule provides the basis for efficiency. Therefore, it might be expected that Nebraska, which in 1938 was advertised as the " White Spot " of the nation because it had no sales, income, or severance tax, would provide an example of outstanding efficiency in the administration of its property tax. Paradoxically, the assessment of property in Nebraska is only short of chaotic. The numerous inequalities in assessment may be grouped into three major divisions: individual, regional, and those which we shall call categorical. This study is limited to the categorical inequalities, i.e., the variations in assessment ratio between major classes of property. We shall attempt to show their nature and extent and to point out some of their consequences.

It is axiomatic that governments should seek to improve the administration of their taxes just as they should strive for high efficiency in making their expenditures. This obligation is most pressing when the tax structure rests upon a narrow base, for as tax rates rise there is a corresponding increase in the urge to evade taxation. Therefore, when the ownership of property serves as virtually the only measure of taxpaying ability,[1] there should be a full listing of property, and the ratio of assessed value to sales value should be uniform not only from taxpayer to taxpayer but from property to property.

The state has been only partially successful in securing legislation designed to improve tax administration. Counties have been authorized to establish " reappraisal committees " [2] and county assessors have been put upon a full-time

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[1] Nebraska's general property tax is the only important source of revenue for state and local purposes that applies the ability-to-pay principle. This tax in 1950 supplied about $104 million out of a total of about $140 million in state and local tax revenues.

[2] *Revised Statutes of Nebraska,* 1943, sec. 77-1301.

basis.[3] Douglas County has been provided with a tax appraisal board.[4] Efforts to legislate such a board for Lancaster County [5] have been defeated as have efforts to provide a state tax appraisal board [6] and to make county assessors appointive.[7] The state tax commissioner has been given sufficient appropriations to permit the employment of six field men who assist the county assessors in discharging their responsibilities. Assessment standards for personal property, however, are still determined by the county assessors in their annual pre-assessment conferences. A number of counties have made determined efforts to improve assessment, some through the employment of real estate appraisal firms [8] and others through development of local organizations.[9]

In Nebraska, market price is used as the index of actual value.[10] It is possible to have high quality assessment without maintaining full value assessments, but a lack of uniformity of assessment ratios among different kinds of property is *prima facie* evidence of poor quality assessment.

In a study of this kind, certain basic assumptions concerning the administration of assessments must be made. In establishing existing assessment ratios it must be assumed that property owners make full disclosure concerning the quantity of each item of property on hand. Obviously, where quantities are discounted by one-half, the result is the same as though there had been a full disclosure but a 50 per cent level of assessment. We assume that in making assessments the assessor is guided by the statutes and not by his own preconceptions as to the proper aggregate assessment or level of assessments. Occasionally, however, administrative officials do consider themselves competent or obligated to assume the legislative function by establishing policies in such matters.

We also assume that typical units are involved in actual sales. There are valid reasons for believing that this may not be true in the case of real estate at least. Farmers may hasten or delay their marketings of livestock in response to changing market conditions, thus affecting the composition of the supply on hand as of assessment day. However, in the absence of information indicating the amount of adjustment required to compensate for such variations, any attempt to compensate must be purely arbitrary.

Market conditions throughout the state at any particular time are assumed to be substantially uniform. Yet it seems fairly obvious that this is not always the case. For example, in view of

[3] *Ibid.*, 1947 Cumulative Pocket Part Supplement, sec. 32-211.

[4] *Ibid.*, sec. 77-2501 to 2510.

[5] *Legislature of Nebraska*, 62d sess., L. B. 504. However, acting under authority of a general statute, the county commissioners have now established a tax appraisal board which is expected to employ a property appraisal firm.

[6] *Ibid.*, L. B. 514.

[7] *Ibid.*, L. B. 502.

[8] Appraisal firms are making or have completed reappraisals in 17 counties.

[9] Local personnel are making or have completed reappraisals in 33 counties.

[10] The Nebraska Supreme Court has declared "actual value" to be value in the market in the ordinary course of trade. *Novak* v. *Board of Equalization of Douglas County*, 145 Neb. 664, 17 N. W. 2d 882.

the tendency for population to shift from farms and small towns to larger centers, it seems likely that real estate values will tend to be deflated in the former and inflated in the latter. But, in the absence of information concerning the extent of this influence, it must be assumed that for the state as a whole it balances out.

Properties which have been selected for study and their changing relationships to the grand assessment roll are shown in the following tabulation:

Year	*Farm Realty*	*City Realty*	*Livestock*	*Automobiles*	*Grains*	*Total*
1950	38.7%	19.8%	8.3%	7.5%	3.6%	77.8%
1945	47.9	20.9	9.4	2.7	1.7	82.6
1940	53.7	22.1	4.6	2.7	1.0	84.2
1935	56.2	22.0	4.5	1.4	.6	84.7
1931	57.0	20.4	4.2	1.9	.8	84.2

Source: Annual reports of the state tax commissioner.

In 1931 these five property categories made up over 84 per cent of the grand assessment roll. As a group, they retained practically the same relative importance until 1944. Increases in other property assessments during the next six years reduced these properties to less than 78 per cent of the grand assessment roll in 1950. This naturally raises the question as to the relative quality of the 1931 and the 1950 assessments.

II

ASSESSMENT RATIO TRENDS

A comparison of assessment ratios in any given year reveals only the extent of inequalities in assessment for that year. The year selected for examination may always be abnormal. An assessment ratio trend analysis covering a series of years, on the other hand, not only reduces this possibility but also makes it possible to observe whether or not there is a tendency for the situation to improve. The procedure adopted in this study, therefore, is to determine the assessment ratio trends for each of the major property categories for the 21-year period ending in 1950.

Farm Lands and Improvements

Farm lands and improvements in 1950 were assessed at slightly over $1 billion and constituted almost 39 per cent of the state's grand assessment roll. This property category is not only the largest but also the most difficult one for which to establish market price. Many farms remain under the same ownership for very long periods of time, while comparatively few change hands with a high degree of regularity. Furthermore, farmsteads lack the uniformity that is characteristic of automobile models, bushels of grain, or even city residences. Farms differ in size, location, soil fertility, and many other significant details which give them individual character.

An estimate of the annual market value of all Nebraska farm land from time to time is shown in Table 1. This estimate assumes that the relationship between sales and assessed values of farm lands that are sold is representative for all real estate including that which remains unsold. A year to year consistency in assessment ratios tends

to confirm this assumption. Farm real estate transfers have fluctuated from year to year both in number and in average size and value per unit, and perhaps in other significant details. Nevertheless, there does not appear to be a better index of market value for farm real estate than that established by actual sales.

TABLE 1

ESTIMATED MARKET VALUE OF NEBRASKA FARM REAL ESTATE, 1930–1950

Values in Millions

Year	Assessed Value *	Assessment Ratio †	Estimated Market Value
1949	$1,045	40	$2,613
1946	1,020	56	1,821
1942	1,016	85	1,195
1938	1,132	92	1,230
1934	1,141	80	1,426
1930	1,737	73	2,379

* Compiled from annual reports of the state tax commissioner.

† See Table 2, Column 4.

Aggregate farm real estate assessments experienced a sharp drop in 1932 and again in 1933. Quantitatively, these assessments fell from $1,737 million in 1931 to $1,148 million in 1933, a reduction of about one-third. These reductions were made by the county assessors, acting independently, apparently with the intent to make assessments reflect the decline in farm land values resulting from the collapse of farm prices.[11] Another reduction in farm land assessments amounting to approximately 6 per cent of the 1931 values was made in 1940. In view of the tendency for real estate assessment ratios to increase throughout the decade of the 1930's, these reductions in assessment were not only justified but seem to have been unduly delayed.

The period since 1941 has been one of rising real estate values. This is shown in Table 2 which presents a farm real estate price index based upon real estate transfers during the period. Assessments might be expected to reflect rising prices during this period. During the years from 1941 to 1950, however, while average real estate sales prices were rising over 155 per cent, assessed valuations rose only 2 per cent. Assessors have been aware of these

TABLE 2

FARM REAL ESTATE PRICE INDEX FOR NEBRASKA, 1930–1949

Year	Average per Acre Sold *		Assessment Ratio	Price Index †
	Assessed Value	Sales Value		
1949	$20.44	$50.89	40	199
1948	20.56	47.54	43	184
1947	20.08	41.81	48	158
1946	19.20	34.30	56	139
1945	18.80	30.68	61	127
1944	20.51	31.87	64	120
1943	21.46	30.00	72	111
1942	20.55	24.17	85	91
1941	16.60	18.29	91	86
1940	14.06	14.66	96	82
1939	14.28	13.74	104	82
1938	13.37	14.60	92	93
1937	14.75	18.24	81	106
1936	16.83	21.28	79	108
1935	20.47	26.40	78	110
1934	19.86	24.72	80	107
1933	24.47	30.66	80	108
1932	26.04	29.60	88	123
1931	32.17	38.69	83	158
1930	26.52	36.50	73	179

* Compiled from *Abstract Reports of State Tax Commissioner.*

† Based upon Table 1, Column 4, with 1934 to 1939 average as 100.

[11] *Report of the State Tax Commissioner,* 1940, p. 133.

changes in real estate values but the custom of carrying forward the prior biennial valuation in the case of real estate apparently has been so strong that no assessor has been willing to initiate an upward adjustment upon his own volition. The statutory provision which requires assessors to notify real estate owners of any increase in assessment tends to strengthen this custom. Consequently, real estate assessments are highly rigid, although the resistance to upward adjustment is somewhat greater than the resistance to downward revision.

The rigidity of farm real estate assessments is reflected in an unstable assessment ratio. In 1930 the assessment ratio stood at 73. With the ensuing decline in farm land prices, the assessment ratio increased to over 100. In 1939 farm lands sold for less, on the average, than the assessed value. With the continuous improvement in farm land prices since 1941, the assessment ratio has shown a steady decline reaching a low of 40 in 1949. In 1949 farm lands were selling, on the average, for two and one-half times the assessed value.

The soundness of these conclusions depends, of course, upon the reliability of the data on farm real estate transfers. Although county officials report all real estate transfers, the number of acres sold annually is only a small percentage of all farm lands, varying during the period under review from a low of .67 per cent in 1934 to a high of 5.1 per cent in 1946.

The reliability of the sales data would be strengthened materially if the size of the sample could be enlarged. This might be done by using a moving average of sales over a number of years. However, the assessment ratio determined in this manner during a period of changing prices tends to obscure the extent of the discrepancy actually existing between current values and assessed values. For example, in 1949 the actual assessment ratio for farm realty as determined by the sales for that year was only 40. A computation based on transactions of the past 20 years produces an assessment ratio of 63.

City Realty

Town lots and improvements in 1950 were valued at $536 million. This item has made up from 20 to 22 per cent of the grand assessment roll throughout the period covered by this study.

City realty assessments display the same rigidity and major trends that are shown for farm realty. Except for a substantial general reduction in valuations from 1931 to 1933, isolated adjustments have been confined to occasions when property improvements, destruction, or transfers have dictated a change in assessment. During the 1930's the sale of a property for less than its assessed value no doubt frequently served as the basis for requests for reduced assessments. Adjustments resulting from such requests probably explain the tendency for the average value per unit to decrease annually until 1940. The increase in the average value per unit since 1940 has been due largely to new construction.

There is a close correlation between the total assessed valuation of city realty and the average assessed value per lot. This relationship is explained by the relative constancy in the total number of units. Both series show a decline of almost 27 per cent from 1931 to 1933 and an additional decline of 7 per cent by 1940. From 1940 to 1950 both series show an increase of only

12.6 per cent. In 1950 city real estate assessments were under the 1930 figure by 14 per cent.

Data on city real estate sales have been available only since 1945. These data show a decline in the assessment ratio from 61 in 1945 to 27 in 1949. Since individual assessments are highly rigid, and since market values are influenced by physical deterioration and obsolescence on the one hand and increased demand on the other, the current tendency for the assessment ratio to decline indicates that the influence of market demand is much greater at present than that of depreciation and obsolescence.

In 1949 urban real estate in Nebraska was worth almost $2 billion but was assessed at only one-fourth of that amount. Its value has more than doubled since 1945. The year to year developments are shown in Table 3.

TABLE 3

ESTIMATED MARKET VALUE OF URBAN REALTY IN NEBRASKA, 1945–1949

In Millions

Year	Assessed Valuation *	Assessment Ratio †	Estimated Market Value
1949	$513	27	$1,899
1948	494	30	1,646
1947	468	32	1,462
1946	463	38	1,234
1945	442	61	724

*Compiled from reports of the state tax commissioner.

†Based upon comparison of total sales price and total assessed value of city realty sold during the year.

Livestock

Livestock constitutes the third largest property category in Nebraska. In 1950 it represented an assessment of almost $224 million and made up over 8 per cent of the grand assessment roll. The principal items of livestock were: cattle, $197 million; hogs, $23 million; horses and mules, $3 million; and sheep and goats, $1 million.

Livestock classes must be studied individually. This is because the prices in the markets do not move harmoniously. For example, the markets for cattle and hogs, while tending to move in the same general direction, frequently are subject to special influences which produce temporary deviations. The markets for horses and mules, on the other hand, reflect the long-run influence of mechanization in agriculture. There is a stronger correlation between the prices of horses and mules than there is between the prices of cattle and hogs.[12] These divergent tendencies are reflected in livestock prices. For example, between 1930 and 1950 the average market price of cattle increased from $55 to $124 per head, whereas for horses the average market price per head dropped from $61 to $33. The decline in the market price for horses and mules provides an excellent example of the effects of obsolescence.

Livestock assessments in Nebraska have been quite sensitive to changes in market price. In general, changes in market prices have been accompanied by corresponding changes in assessed value. The magnitude of the change, however, has not always been the same. This lack of complete harmony is reflected in a moderate variation in assessment ratios.[13]

[12] The correlation from 1930 to 1950 between cattle and hogs assessments was less than 65 per cent; for horses and mules it was 98 per cent.

[13] The average deviation in yearly assessment ratios for both cattle and hogs between 1930 and 1950 was 12.

There is also a lack of uniformity in the rate of assessment between cattle and hogs, the two major classes of livestock. In 1950, cattle and hogs were assessed at 51 and 63 per cent of market value, respectively; both classes had been assessed at approximately 70 per cent in 1930.

parison suggests that only from 72 to 81 per cent of cattle and from 35 to 51 per cent of hogs are actually listed.

Various explanations have been advanced to account for the apparent fractional listing. Some believe it is due to the time lag between January 1 when the department of agriculture

TABLE 4

Livestock Assessment and Listing Ratios, 1930–1950

Year	Average per Head		Assessment Ratio	Number of Livestock ‡		Listing Ratio
	Assessed Value *	Sales Price †		Listed by Assessors *	Official Estimate †	
			Cattle			
1950	$63.21	$124.00	51	3.1	3.9	79
1945	50.13	61.80	81	3.2	4.2	77
1940	30.98	41.20	75	2.2	2.9	75
1935	23.38	18.00	130	2.5	3.2	77
1930	38.50	55.00	70	2.5	3.1	81
			Hogs			
1950	$20.19	$ 32.00	63	1.1	2.5	45
1945	17.87	26.90	66	1.0	2.6	39
1940	5.30	8.70	61	.9	2.4	37
1935	8.55	6.10	124	.9	2.0	43
1930	10.78	15.60	69	2.0	5.0	40

* Compiled from annual reports of the state tax commissioner.

† Data compiled from worksheets in the office of the Bureau of Agricultural Estimates of the U. S. Department of Agricultural Economics, Lincoln, Nebraska.

‡ In millions.

The effects of underassessment are accentuated by fractional listing. For example, if a man who owns 100 goats lists only 77 goats, each at 51 per cent of value, the result is the same as though he had listed all 100 goats, each at 39 per cent of value. Fractional listing, however, does not justify a high level assessment. It would do so only if all property owners listed the same fraction of their properties, a most unlikely circumstance. The extent to which fractional listing of livestock occurs in Nebraska is not known. That it is considerable is suggested by a comparison of the estimates of the federal agricultural department with the number reported by assessors. This com-

prepares its estimates and March 10 when assessors make their listings. Others think it may be due to a practice on the part of assessors who sometimes list a cow-and-calf as only a cow and a sow-with-litter as only a sow. Still others believe there is a widespread practice on the part of livestock owners to move their animals outside the taxing jurisdiction in anticipation of the assessor's visit in order to evade a full listing. A great deal of research would be required to determine the significance of each of these factors.

Livestock assessments have fluctuated considerably over the 20-year period, as shown in Table 4. Hog assessments in 1950 were approximately the same as in

1930, roughly $22 million; these assessments, however, reached a low of only $5 million in 1940. On the other hand, cattle assessments in 1950 were more than twice the amount of the 1930 assessment, having reached a low of $48 million in 1933 and a high of $196 million in 1950. The year to year variation in total assessments has been greater for hogs than for cattle for several reasons: (1) the difference in the period of time required for supply to adjust itself to demand; (2) year to year variations in livestock market conditions; and (3) year to year variations in the supply of feeds and forage crops.

Grains, Seeds, and Forage Crops

Grains, seeds, and forage crops in 1950 were assessed at $98 million and made up 4.62 per cent of the state grand assessment roll. Although these properties are still of minor importance, there has been considerable expansion since 1937 when they made up less than ¼ per cent of the total assessment. A breakdown of this property classification for 1950 follows:

Field corn	$77	million
Wheat	15	"
Other grains	4	"
Forage crops	2	"
Seeds	½	"

Corn and wheat alone make up over 93 per cent of the total valuation. Any change in the quality of assessment of the remaining items is not likely to have a profound effect upon the total valuation.

The assessed valuations of both corn and wheat show considerable variation from year to year (Table 5). Both valuations show a considerable drop in 1932 over 1931, reflecting the decline in grain prices. During subsequent years the valuations have fluctuated with changes in grain prices.[14] This tendency for prices and assessments per bushel to move together is reflected in a fairly stable assessment ratio.[15] There

TABLE 5

GRAIN ASSESSMENT RATIOS IN NEBRASKA, 1931–1950

Listings and Assessments in Millions

Year	Bushels Listed *	Assessed Valuation *		Sales Price †	Assessment Ratio ‡
		Total	Per Bushel		
		Corn			
1950	98	$76	$0.78	$1.18	66
1948	37	55	1.50	2.12	71
1946	32	25	.79	1.13	70
1944	32	25	.77	1.03	75
1942	49	29	.59	.65	88
1940	31	13	.43	.56	77
1938	11	5	.43	.51	84
1936	16	6	.39	.61	64
1934	78	21	.27	.41	66
1932	33	6	.19	.30	63
1931	42	14	.34	.46	74
		Wheat			
1950	10	$15	$1.49	$1.91	78
1948	12	18	1.59	2.23	71
1946	3	3	1.16	1.47	79
1944	6	7	1.11	1.35	82
1942	13	12	.89	.98	91
1940	5	4	.74	.67	110
1938	3	2	.68	.98	69
1936	3	2	.72	.85	85
1934	7	4	.62	.72	86
1932	13	4	.30	.34	88
1931	16	7	.45	.59	76

* Compiled from annual reports of the state tax commissioner.

† Data compiled from worksheets in the office of the Bureau of Agricultural Estimates of the U. S. Department of Agricultural Economics, Lincoln, Nebraska.

‡ Computed by dividing assessed value per bushel by sales price per bushel.

[14] The correlation between the per bushel market price and assessed value over the 20-year period for wheat and corn was .97 per cent and .98 per cent, respectively.

[15] The average deviation in the assessed value from market price over the period was .162 per cent for wheat and .378 per cent for corn.

is a tendency for wheat to be assessed at a somewhat higher percentage of full market value than formerly, while the assessment ratio for corn is approximately the same in 1950 as it was in 1930. In 1940, wheat was assessed for more per bushel than its selling price.

The owners of grain contribute more toward the support of government per dollar of actual worth than do owners of farm land. For example, in 1949 a dollar's worth of wheat was listed at 78 cents and a dollar of corn at 66 cents, while a dollar's worth of land was listed at only 40 cents. Ten years before, however, the situation was reversed with landowners bearing an excessive burden.

Motor Vehicles

Motor vehicle assessments in Nebraska in 1950 amounted to over $202 million and made up 7.47 per cent of the grand assessment roll. This item, constituting in 1931 only 1.85 per cent of the grand assessment roll, has grown in importance continuously throughout the 20-year period. Paralleling the development of automotive transportation, the expansion of automobile assessments demonstrates the fallacy of the common assumption that each class of property should continue year after year to constitute the same percentage of the grand assessment roll. There is probably no single item of property in Nebraska that is more fully listed than automobiles, since the payment of the property tax thereon is a prerequisite to registration, and thus to operation.

Motor vehicle assessments are only moderately sensitive to changes in market price.[16] Since new automobiles are listed at 75 per cent of the manufacturer's list price, changes in market price result in some changes in automobile assessments of new cars. Old car assessments, on the other hand, do not reflect subsequent changes in market price because, after the first year, each assessment is lower than the previous by an amount equal to 15 per cent of the manufacturer's list price.

The practice of relating each year's assessment to the manufacturer's list price without regard to subsequent changes in market price results in significant inequalities in automobile assessments. For example, in 1950—when used car prices experienced a temporary but substantial price decline—year-old models of the ten leading automobile makes were assessed at an average of 92.8 per cent of the market value.[17] In 1951—after new and used car prices had recovered—year-old models were assessed on the average at only 75.4 per cent of market price. New cars in both 1950 and 1951 were assessed at 75 per cent of the manufacturer's list price. Analysis of automobile assessments in other years no doubt would produce similar evidence of assessment inequalities.

Inequalities in motor vehicle assessments seem due in part also to the assumption of a constant and uniform rate of depreciation and obsolescence.[18]

[16] Automobiles are assessed by county assessors who follow a Motor Vehicle Tax Guide which is prepared annually by the office of the state tax commissioner. The guide lists the assessed values of the various makes, models, and body styles of automobiles for the year.

[17] The figures presented in this section on motor vehicles have been supplied by Mr. Leonard Bronder, graduate assistant in the department of economics of the University of Nebraska, who has made a careful statistical analysis of automobile assessments in Nebraska.

[18] All makes are depreciated uniformly by the straight-line method at the rate of 15 per cent per year after the first year.

During a period in which automobile production is limited by the government, e.g., during World War II and during the "Korean Situation," automobiles are kept in operation and command prices far in excess of normal. Since some makes of automobiles maintain their values better than others, the spread in assessment ratios among the various makes of automobiles tends to increase year after year. For example, in 1950 the spread in assessment ratios for the ten leading makes of automobiles of the 1948 model was only 17 per cent whereas the 1939 models showed a spread of 107 per cent. Similarly, in 1951 the spread in assessment ratios for two-year-old models was 28 per cent, while that for seven-year-old models was 77 per cent.

A third significant generalization concerning automobile assessments is that the assessment ratios during recent years have tended to vary inversely with the age of the automobile (Table 6). The failure of assessment ratios to hold firm as the automobiles have increased in age has been due to adoption of a rate of depreciation and obsolescence that has exceeded the actual decline in market value of automobiles. The upward trend of the price level has undoubtedly been a contributory factor. It is, however, possible that the depreciation rates actually used would have been adequate under conditions of stable prices and a more normal automobile market.

TABLE 6

USED PASSENGER CAR ASSESSMENT RATIOS IN NEBRASKA, 1950

Make	Year Model							
	1939	1940	1941	1942	1946	1947	1948	1949
Buick	68	81	80	94	83	97	94	96
Cadillac	124	105	82	77	88	95	93	93
Chevrolet	48	49	52	63	66	79	83	83
Chrysler	72	84	83	95	81	90	92	112
Dodge	65	69	73	79	76	86	89	90
Ford	57	61	78	85	74	95	91	94
Lincoln	162	148	160	160	102	105	100	100
Plymouth	60	60	69	68	72	89	86	89
Pontiac	55	57	58	67	74	83	84	80
Studebaker	74	80	74	70	67	80	83	91
Spread in percentage points	114	99	108	97	36	26	17	32
Unweighted average ratio	79	79	81	86	78	90	90	93

Ratios based upon comparison of values prescribed in *Nebraska Motor Vehicle Tax Guide* and those contained in the *National Automobile Dealers Association Used Car Price Guide*, March 1950.

The assessment ratio for automobiles [19] as a class fluctuates considerably from year to year for the reasons indicated above. The average assessment ratio in 1951 during the Korean War prosperity was 72 per cent compared to an average of 46 in 1949 and 84 in 1950.

[19] New car assessment ratios are deceptively high. An assessment of 75 per cent of the manufacturer's list price is equivalent to approximately 60 per cent of retail sales price, including federal tax and transportation costs. So far as private owners of automobiles are concerned, it is the latter figure that is significant. Owners of other kinds of personal property are assessed upon the basis of retail price rather than wholesale price. Automobile dealers on the other hand should be entitled to have their assessments based upon the manufacturer's list price.

III

SOME EFFECTS OF UNEQUAL ASSESSMENT

One of the principal effects of the practice of valuing property from year to year at a continually decreasing percentage of market value has been to inflate tax rates. The tax rates required to raise property tax revenues have been substantially higher than would have been necessary if assessments over the past 20 years had maintained a constant relationship to actual or market value. Inflated tax rates produce other undesirable results.

The 1949 mill levies were inflated at least 53 per cent on the average. This conclusion is based upon the analysis presented in Table 7 which shows the 1949 assessments of the properties included in this study after adjustment to a 75 per cent assessment basis.[20] The "1949 assessment basis" reflects both undervaluation and underlisting. When raised to a 75 per cent basis, the 1949 assessment produces a valuation of $3,132 million which is 153 per cent of the reported assessment of only $2,045 million.

Inflated tax rates exaggerate the growth of the property tax burden. For example, the average mill levy imposed by the state from 1921 to 1931 was 2.44 mills.[21] Compared to the 1949 state mill levy of 5.86 mills, there is an increase of 140 per cent. However, if the 1949 assessments had been based upon 75 per cent instead of 49 per cent of market value, a levy of only 3.82 mills would have produced an equal amount of revenue. The effective tax rate in 1949, therefore, was only about 50 per cent higher than the 1920 level instead of 140 per cent. The same generalization applies to the aggregate mill levy, i.e., the combined state and local levies. The state-wide average aggregate mill levy during the decade of the 1920's was 17.3 mills.[22] Compared to an aggregate of 36.2 in 1949, there has been an apparent increase in levies of 103 per cent. With a 75 per cent assessment basis, however, a levy of

TABLE 7

1949 PROPERTY ASSESSMENTS IN NEBRASKA ACTUAL AND ADJUSTED TO 75 PER CENT BASIS

Values in Millions of Dollars

Property Category	1949 Assessed Value *	1949 Assessment Basis	Assessment Adjusted to 75% Basis	Amount of Underassessment of Property
Farm real estate..	$1,045	40	$1,971	$ 926
City real estate..	513	27	1,425	912
Cattle ...	194	47	309	116
Hogs	25	56	33	8
Corn	86	69	94	8
Wheat ..	25	76	24	−1
Automobiles ..	158	46	344	186
Total ...	$2,045	49	$4,201	$2,155

* Compiled from *Annual Report of the State Tax Commissioner*, 1950.

[20] The 75 per cent basis adopted in this study has official sanction, having been used by the State Board of Equalization and Assessment in equalizing railroad properties since about 1928. See, for example, the *Annual Report of the State Tax Commissioner*, 1930, p. 68.

[21] This figure is computed on the basis of total taxes levied and grand total of assessments reported by the state tax commissioner in the annual reports from 1921 through 1930.

[22] If livestock assessment ratios were adjusted to compensate for the evident underlisting, the 1949 mill levies would reflect an inflation of 110 per cent and the state levy required to raise the revenues produced by the 5.86 state mill levy would have been only 2.74 mills.

23.64 mills would have produced the same amount of revenue. The real increase in tax rates over the decade of the 1920's, therefore, was not more than 34 per cent.

Inflated tax rates, by exaggerating the burden of the property tax, may stimulate undue antagonism toward the government. When the rates of taxation and the tax revenues increase simultaneously, the average taxpayer probably concludes that the real costs of government are on the increase. Actually, the increase in tax revenues may be necessitated by price inflation while the increased tax rates may be the consequence of a declining assessment ratio. Meanwhile, the real costs of government may remain unchanged.

Inflated tax rates tend to exaggerate the difference between the rate of tax imposed upon tangible property on the one hand and intangibles on the other. For example, in 1950 the average aggregate tax rate on rural property was 27.7 mills.[23] Since Class B intangibles are taxed annually at a fixed rate of eight mills, it would appear that farm properties are taxed at approximately three and one-half times the rate at which stocks and bonds are taxed. However, if farm properties like intangibles were listed on a 100 per cent basis, in 1950 their average aggregate tax rate might have been only 10.5 mills. This leaves the average tax rate on farm property only slightly higher than the rate on stocks and bonds. Similarly, the average aggregate tax rate on urban property in 1950 was 58.2 mills.[24] With valuations adjusted to a 100 per cent basis, a levy of 15.7 mills would have produced the same amount of revenue. The average effective tax rate on urban property then is only twice as great as that on securities instead of over seven times, as the nominal rates would make it appear.

Inflated tax rates have forced the legislature to relax the statutory tax rate limits. With the expenditures of local government constantly on the increase, due largely to price inflation, and with local assessment remaining practically constant, local governments have been faced with the unhappy alternative of either reducing governmental services or of increasing their tax rates; there is a limit to which the costs of government may be reduced by increasing governmental efficiency. Each year since 1941 legislation designed to relax tax rate limits has been enacted by the legislature.[25] Each time it was assumed that the price level would soon decline, permitting local governments to effect substantial reductions in their budgets and again be governed by the original rate limits.

Inflated tax rates in Nebraska created a serious problem for fire insurance companies which led, during the last session of the legislature, to a revision of the method of taxing these companies. Prior to 1952, fire insurance companies were required to report to the state tax commissioner their premium collections, together with the names and addresses of the agents mak-

[23] This figure is computed upon the basis of data provided in *Annual Report of the State Tax Commissioner*, 1950, p. 198.

[24] *Ibid.*

[25] *Legislature of Nebraska:* 57th sess., L.B. 478; 58th sess., L.B. 435; 59th sess., L.B. 165; 60th sess., L.B. 464, L.B. 260, L.B. 121, L.B. 139, L.B. 3[illegible]; 61st sess., L.B. 97, L.B. 410, L.B. 409; 62d sess., L.B. 67, L.B. 544.

ing the collections.[26] These premiums were then listed as items of property in the political subdivisions where collected and were subjected to the ad valorem rate. With each decline in the assessment ratio and consequent increase in tax rates, insurance companies found it less profitable to do business in Nebraska.[27]

Declining assessments in Nebraska have given rise to a fiction frequently referred to as the "lost billion."[28] This refers to the difference between the 1921 and the 1946 total assessments which were $3,213 million and $2,161 million, respectively—a difference of $1,052 million. The implication of the term is that some properties included in the first assessment have been excluded from the second. Accordingly, efforts have been directed to increasing the listing of certain classes of property, particularly business inventories and personal property, which are believed inadequately reported. It is apparent from Table 7 that the "lost billion" is actually over two billion and that the progressive underassessment of real estate alone accounts for the bulk of it.

There is no justification from a legal standpoint for categorical inequalities in the assessment of tangible properties in Nebraska.[29] All properties which are not specifically exempted are by statute required to be fully listed and assessed at their actual value.[30] While the courts have sanctioned fractional assessment, they have not approved the listing of various properties or classes of property (except intangibles) at different percentages of full value.[31] Not even the legislature, which is the policy-making body, has the power to establish different bases of assessment for various classes of property until the state constitution has been liberalized to permit such a course.

It may be possible to justify inequalities in assessment among different classes of property from an economic standpoint. For example, the ability of a cash-grain farmer to convert his grain inventories into cash or bank deposits and thus to enjoy some tax advantage may seem to justify some discrimination in favor of properties which cannot readily be so converted. Similarly, it may be that owners of properties with a rapid rate of turnover enjoy an advantage over owners of properties with a slow rate of turnover. These differences merely emphasize some of the shortcomings of a property tax and may serve as the basis for a revision of the constitution and statutes; they do not justify a conscious disregard of the tax law.

[26] *Revised Statutes of Nebraska, 1943*, Ch. 77, sec. 905.

[27] *Legislature of Nebraska*, 62d sess., L.B. 527. In 1951 the legislature provided for taxing fire insurance companies upon an identical basis with other insurance companies; i.e., they became taxable by the state and were required to pay a tax of 2 per cent upon their gross premiums. To compensate local governments for the resultant loss in property tax revenues, a formula was provided for sharing the proceeds of the new tax among the various levels of government.

[28] *Lincoln State Journal*, July 26, 1951, p. 1.

[29] The Constitution of Nebraska permits special treatment of intangibles. See Article 8, sec. 1.

[30] C.S. 1929, sec. 77-202: All property in this state, not expressly exempt therefrom, shall be subject to taxation, and shall be valued and assessed at its actual value.

[31] See *Chicago, R.I. and P.R. Co.* v. *State* (1923), 111 Nebr., 362, 197 N.W. 114; *Haarman V. and P. Co.* v. *Douglas County* (1932), 122 Nebr. 643, 241 N.W. 114; and *Lincoln Tel. Co.* v. *Johnson County* (1918), 102 Nebr. 254, 166 N.W. 627.

It is sometimes contended that the actual value of farm land is not reflected in the current "market." This view underlies the practice in Nebraska of computing cumulative average sales price per acre of farm land.[32] There is no theoretical basis for such a view. While soil fertility and location are undoubtedly the prime factors determining relative real estate values, year to year fluctuations in farm land prices reflect changing long-run profit expectations. Prospective purchasers of farm land must realize that in any single year the farm returns may be either abnormally high or abnormally low. Long-run profit expectations are affected by changes in the general price level, shifts in population, improvements in technology, and so on. The relative stability in the supply of farm land explains why farm real estate prices fluctuate less than the prices of other properties, but does not justify the conclusion that sales prices do not reflect actual farm land values. To average farm land prices over a number of years is to attempt an adjustment which the forces of the market have accomplished in the normal course of trade. Furthermore, adoption of a moving average tends to increase the rigidity of the property tax. One of the major objections to the property tax is that it is too rigid and does not fluctuate with changes in the owner's ability to pay.

It is sometimes contended that the adjustment of real estate assessments from year to year to reflect changing market conditions is administratively impossible. This may be true in those offices that are too small to afford modern mechanical equipment, but ordinarily with the aid of such equipment a competent clerk can easily adjust real estate values to reflect current market values.

A prolonged continuation of the practice of undervaluation must eventually breed such contempt for the property tax as to cause its replacement by other forms of taxation. In the meantime, the development of habitual disrespect for tax law may prevent the successful administration of replacement taxes. If properties are to be assessed at different percentages of full value, the practice should be legalized so that the conscientious property owner will not be penalized.

IV

SUMMARY AND CONCLUSIONS

Under conditions of fluctuating market prices, inequalities in assessment result from differences in sensitivity of assessments to changes in market price. From this standpoint, property assessments in Nebraska may be grouped into three major classes: (1) those which are generally responsive to price changes (personal property exclusive of motor vehicles); (2) those which are erratically sensitive to price changes (motor vehicles); and (3) those which are practically unresponsive (real estate). Farm real estate is currently assessed at less than 40 per cent of market value; city real estate is assessed at a little more than 25 per cent; grains at about 75 per cent; and cattle and hogs

[32] See, for example, *Annual Report of the State Tax Commissioner*, 1950, statement No. 12A, Column 2, p. 113.

at approximately 50 per cent. Automobiles are assessed at different percentages depending upon their make and age.

The assessment ratios for some property categories may not measure the true or effective rate of assessment. This is caused by incomplete listing, which may be of significant proportions in the case of livestock at least, but is of virtually no significance in the case of real estate and automobiles.

Categorical inequalities in assessment result in an inequitable distribution of the costs of government from both regional and individual standpoints. The lack of uniformity in the regional and individual pattern of property ownership is responsible.

The failure of assessments to keep pace with market values, i.e., the general downward trend of assessment ratios, has caused a serious inflation of tax rates. This in turn has caused the legislature to relax the statutory tax rate limits, thereby reducing their effectiveness and unduly stimulating resistance to government spending. Should the economy enter a period of a substantially lower price level, the new tax rate limitations will not be effective in forcing desirable reductions in governmental expenditures.

This study confirms the conclusion derived from many other investigations that centralized equalization does not eliminate the results of poor original assessment. Under the leadership of the state tax commissioner and with the help of the six field men, the county assessors of Nebraska in their pre-assessment conferences have succeeded in removing many individual inequalities in assessment of tangible personal property; they have not succeeded, however, in eliminating the inequalities between classes of property.

Both state and local tax administrative officials are becoming increasingly aware of the need for improved assessment. Many communities for the first time are taking positive action to improve the situation. The unfavorable trends disclosed in this investigation may possibly be reversed within the next biennium.

DEATH DUTIES AND DOUBLE TAXATION: CANADA AND THE UNITED STATES COMPARED

GEORGE R. HAWKES *

I

FOR A BRIEF PERIOD in recent times the United States Supreme Court looked upon taxation of the same property at the same time by two or more states as an evil to be eliminated, and it made a serious effort to bring to an end such double taxation. Some rules were devised to cover property taxes; others were devised for inheritance taxes. Different rules were applied to the various kinds of property —real, tangible personalty, and intangibles.

A tax on property is a tax imposed upon the owner of that property. It has long been established that only the state of actual physical location of land and other immovables has jurisdiction to impose a tax on such real property. Thus, there could be no question of double taxation of immovables. For movable property the rule of *mobilia sequuntur personam* (movables follow the owner) placed jurisdiction to tax with the state of domicile of the owner of that property. The way was left open for taxation by both the state of physical location of the movables and the state of domicile of their owner. Then tangible personal property was removed from this rule and jurisdiction to tax was held to rest solely with the state wherein the tangible personal property was physically located, leaving the principle of *mobilia sequuntur personam* to apply only to intangible personalty.[1]

In the case of intangibles involving a debt relationship the determination of tax situs required that a choice be made among the domicile of the debtor, the domicile of the creditor, or the actual location of the physical instruments evidencing the debt. In choosing between the domicile of the debtor and the domicile of the creditor the Court stated that debts are obligations of the debtors and valuable property only in the hands of the creditors, therefore taxable only by the state of domicile of their owners, which is to say the creditors.[2] This rule survived in spite of considerable opposition, notably from

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[1] *Union Refrigerator Transit Co.* v. *Kentucky*, 199 U.S. 194 (1905).

[2] Case of the *State Tax on Foreign-Held Bonds*, 15 Wall. 300 (1872).

Justice Holmes.[3] Stocks and bonds in a trust were recognized to have acquired a situs of their own; it was declared that the *mobilia sequuntur personam* " fiction " should not permit two states to tax the same thing at the same time, and that the securities in question were taxable only where the instruments were located.[4]

Similar rules were developed for inheritance taxes. Immovables were declared taxable only by the state of physical situs on the theory that only that state can have jurisdiction over such property, therefore only that state can impose conditions upon its transfer by inheritance.[5] In the case of the inheritance of movables, however, the principle of *mobilia sequuntur personam* necessitated a choice between two persons, the deceased and his heir. The U. S. Supreme Court selected the domicile of the deceased on the grounds that the state in which he was domiciled at the time of his death had jurisdiction over the disposition of the deceased's property, and most states wrote their inheritance tax laws accordingly. No reason other than convenience of collection was ever presented as to why the state of domicile of the *heir* was not chosen on the theory that the right of the living heir to *receive* property was subject to the jurisdiction of the state of his domicile. As had been done earlier with the property tax, the *mobilia sequuntur personam* rule was restricted to intangibles when the Court held, in 1925, that a tax on the transfer of tangible personal property on the death of the owner could be imposed only by the state within which it was physically located.[6]

In 1930 the Court decided that personal property in action was taxable only by the state of domicile of the creditor, specifically overruling an earlier decision that the inheritance of such property was taxable at both the debtor's domicile and the domicile of the creditor.[7] In 1932 the Court boasted that double taxation had been eliminated and repeated the rules by which double taxation was to be avoided forever after.[8] In the words of Justice Sutherland,

> A transfer from the dead to the living of any specific property is an event single in character and is affected under the laws, and occurs within the limits, of a particular State; and it is unreasonable, and incompatible with a sound construction of the due process of law clause of the 14th Amendment, to hold that jurisdiction to tax that event may be distributed among a number of States.[9]

For tangibles this event takes place where the property has an actual situs. For intangibles, *mobilia sequuntur personam*. Specifically listing different kinds of intangibles the Court stated that for " bonds, certificates of indebtedness, notes, credits, and bank deposits," and also for " corporate shares of stock . . . there is wanting, on the part of a state other than that of the

[3] See *Blackstone* v. *Miller*, 188 U.S. 189 (1903), and dissenting opinion in *Safe Deposit & Trust Co. of Baltimore* v. *Virginia*, 280 U.S. 83 (1929).

[4] *Safe Deposit & Trust Co. of Baltimore* v. *Virginia*, 280 U.S. 83 (1929).

[5] *United States* v. *Fox*, 94 U.S. 315 (1876).

[6] *Frick* v. *Pennsylvania*, 268 U.S. 473 (1925).

[7] *Farmers' Loan & Trust Co.* v. *Minn.*, 280 U.S. 204 (1930), overruling *Blackstone* v. *Miller*, 188 U.S. 189 (1903).

[8] *First National Bank of Boston* v. *Maine*, 284 U.S. 312 (1932).

[9] *Ibid.*, p. 327.

domicile, any real taxable relationship to the event which is the subject of the tax." [10]

In less than a decade, however, double taxation of intangibles had returned. The old rules broke down before two new developments. In the first place, it was found that a person might so live that at his death each of two or more states could reasonably claim to be the state of his domicile. In such a case, when each state has judicially decided that it was the domicile of the decedent, the Supreme Court admitted that an inheritance tax by each state upon the same property could not be prevented.[11] Only if the decedent's estate were insufficient in amount to satisfy the claims of all the states involved would there be grounds for a suit by one state against another which would enable the Supreme Court to decide which had been the true state of domicile.[12]

The other point at which the rules against double taxation proved inadequate involved the " business situs " of intangibles placed in trust. The Court stated that if a person carried on activities with intangibles so as to place them under the protection and supervision of more than one state then each state might have jurisdiction to tax some or all of those intangibles. Thus, an inheritance tax on the trust property was permitted by the state of domicile of the deceased creator of the trust under the rule of *mobilia sequuntur personam* and also by the state where the trust property was located and the trustee was domiciled.[13] The Court pointed out other possibilities of double taxation: shares of stock could be taxed by the state of the owner's domicile and by the state of incorporation of the issuing company, income could be taxed by the state where the income was earned and by the state of the earner's domicile, and intangibles used in business could be taxed by the state of domicile of the owner and by the state of business situs. Jurisdiction for one reason was declared not to preclude jurisdiction of another state for another reason.

Finally, completing the reversal, the Court specifically decided that the 14th Amendment did not include any rule of immunity from taxation of the same thing at the same time by more than one state.[14] Removal of double taxation was left for the states to accomplish themselves by reciprocal agreements.

Since it has now been established that there is nothing in the Constitution of the United States to prevent double taxation, the question arises, Why should the states not revise their death tax laws so as to *add* to the tax by the state of domicile of the deceased a tax by the state of domicile of the heir? The incidence of any death tax must fall upon the heir, so it is only logical that the state of domicile of the heir should be the one to benefit by such a tax. Furthermore, the Canadian system provides that jurisdiction to levy death duties rests with the province wherein the heir is domiciled; a tax on

[10] *Ibid.*, p. 329.

[11] *Worcester County Trust Co.* v. *Riley*, 302 U.S. 292 (1937).

[12] *Texas* v. *Florida*, 306 U.S. 398 (1939).

[13] *Curry* v. *McCanless*, 307 U.S. 357 (1939), supported by *Graves* v. *Elliott*, 307 U.S. 383 (1939).

[14] *State Tax Commission of Utah* v. *Aldrich*, 316 U.S. 174 (1942), expressly overruling *First National Bank of Boston* v. *Maine* in so far as it held that the 14th Amendment includes a " rule of immunity from taxation by more than one State."

the transmission of property at the death of its owner can be imposed at the domicile of the heir *to* whom the property is transmitted, not at the domicile of the decedent *from* whom the property is transmitted. Though Canadian law and United States law have gone their separate ways in many respects, nevertheless they are derived from a common source, and each country holds the law of the other in high esteem. Since the Supreme Court has openly avowed that the 14th Amendment did not outlaw double taxation it seems highly unlikely that it would find a tax imposed by the state of domicile of the heir, a tax fully sanctioned in the law of Canada, to be in violation of the due process clause.

There would seem to be no constitutional reason to prevent the adoption of the Canadian system of death duties by some or all of the American states. Moreover, state legislatures, seeking every possible source of tax revenue, might well see definite advantages in adopting this system, not as a substitute for existing laws but as an addition to them. Therefore, it would appear to be fruitful to examine the Canadian law in some detail.

II

Prior to the time of adoption of the first succession duties in any of the Canadian provinces it had been established in English law that the principle of *mobilia sequuntur personam* gave jurisdiction to tax personal property to the state of domicile of the decedent. The case of *Thomson* v. *Advocate-General* [15] involved an attempt by Scotland to charge the estate of a deceased resident of the British colony of Demarara legacy duty on a personal debt due the deceased and payable in Scotland. It was held that ". . . the rule of law, indeed, is quite general that in such cases the domicile governs the personal property, not the real; but the personal property is in contemplation of the law, whatever may be the fact, supposed to be within the domicile of the testator or intestate." [16]

The Succession Duty Acts of the Canadian provinces were apparently patterned after the British Succession Duty Act of 1853, which was interpreted by Lord Cranworth in *Wallace* v. *Attorney-General*.[17] The act imposed a duty upon the *succession* to property whereby one person became entitled to that property at the death of another person. Lord Cranworth stated, however, that a person, to be brought within the provisions of the act, " must be a person who becomes entitled by virtue of the laws of this country. Any wider construction would give rise to difficulties hardly to be surmounted." [18]

Broad restraints on the taxing power were generally lacking in British law as was indicated in *Blackwood* v. *Regina*.[19] " There is nothing in the law of nations which prevents a government from taxing its own subjects on the basis of their foreign possessions. It may be inconvenient to do so. The reasons against doing so may apply more strongly to real than to personal estate. But the question is one of discretion, and is to be answered by the statutes under

[15] 12 [1845], Cl. & F. 1, 8 E. R. 1294.

[16] *Ibid.*, p. 26, 1304.

[17] [1865] L. R. 1 Ch. 1.

[18] *Ibid.*, p. 7.

[19] [1882] 8 App. Cas. 82.

which each state levies its taxes, and not by mere reference to the laws which regulate successions to real and personal property." [20]

The Canadian provinces, however, were specifically restricted by the British North America Act of 1867. By Section 92, sub-section 2, of that act the provinces were given exclusive power over "Direct taxation within the Province in order to the raising of a revenue for Provincial purposes." A recent opinion by the Chief Justice of the Ontario High Court indicates that this is the only legal restraint on the taxing power of the provinces.

> Indeed, I think it can be said that the general trend of the authorities is to ignore the economists' discussion of the question as to what a tax ought to be, and to treat as valid taxation within the meaning of s. 92 (2) of the B. N. A. Act, measures adopted by the Province, even if, because of the method of computation of the amounts payable or for other reasons, they are of unequal or even unfair application, provided, of course, that they stand the tests of directness and do not transgress the territorial limitation.[21]

Under these conditions, the first succession duties were introduced into the Canadian provinces in 1892. In ruling upon the validity of these acts the courts adopted as the definition of a direct tax that of the economist, John Stuart Mill, a tax which is "demanded from the very person who it is intended or desired should pay it." The Quebec statute which provided for collection of the tax from the executor or administrator of the estate, who would then recoup himself from the estate, which is to say from the beneficiaries, was declared *ultra vires* of the Provincial Government because of the method of collection.[22] When this defect had been corrected by a revised statute which specified that the beneficiary was made solely liable, the tax was allowed in cases arising subsequent to the revision.[23]

The words "within the Province" were more difficult to define. In the case of immovable property the rule was well established that only the province in which the property was actually situated had jurisdiction to tax. With movables, and particularly intangibles, the rule *mobilia sequuntur personam* might or might not hold, depending upon the wording of the statute or other considerations. Thus, Quebec was not permitted to impose a succession tax on intangible property located in Quebec when both decedent and beneficiary were domiciled in Ontario.[24] It was decided that the *mobilia sequuntur personam* rule applied and that the successor to the property claimed title by virtue of Ontario law, not the law of Quebec.

The Ontario law, on the other hand, required payment of duty on all property situated within the province whether the deceased owner was domiciled in Ontario at the time of his death or not, the tax to be a charge against the corpus of the estate. Ontario was permitted, under this law, to impose a succession tax on bank deposits in Ontario of a decedent resident of Detroit, Michigan. It had been established in English law in the case of *Commissioner*

[20] *Ibid.*, p. 96.

[21] *Re Flavelle*, [1943] 1 D. L. R. 756, 776.

[22] *Cotton* v. *The King*, [1914] A. C. 176.

[23] *Alleyn* v. *Barthe*, [1922] 1 A. C. 215.

[24] *Lambe* v. *Manuel*, [1903] A. C. 68.

of Stamps v. *Hope* [25] that the situs of a simple contract debt is the personal residence of the debtor. That rule was applied in place of the *mobilia sequuntur personam* rule to these Ontario bank deposits. "It is plain," said the Ontario court, "that the statute contemplates a site and locality being given to all kinds of personal property, and that the domicile of the deceased owner is not to be taken into account. Hence is displaced at the very outset any application of the maxim, *mobilia sequuntur personam*, the expression at most of a convenient legal fiction." [26]

The New Brunswick Succession Duty Act of 1896, amended in 1897, provided for a tax on all property within the province, regardless of domicile of deceased or beneficiary, and a tax on property outside the province passing to a New Brunswick resident regardless of the domicile of the decedent. It was held in *Rex* v. *Lovitt* [27] that a deposit in the New Brunswick branch of the Bank of North America, left by a resident of Nova Scotia, was subject to the New Brunswick tax. The opinion stated that the principle, *mobilia sequuntur personam*, might be avoided by the use of apt and clear words in a statute for the purpose, and that this act excluded the application of the principle as regarded property within the province belonging to persons domiciled elsewhere, but retained it as regarding property of New Brunswick citizens situated outside the province. It was also stated that in such a situation the duty might be doubled in that Nova Scotia could tax again when the money passed to a Nova Scotia citizen.

In addition to the tax on *property* transmitted there might be a tax on the *transmission* of property due to the death of its owner. It has been held that an interpretation of the statute itself must determine when a transmission has taken place *within the province*. The revised Quebec statute, for instance, in addition to its requirement for a succession tax on all property within Quebec, made liable to tax all *transmissions* within the province, owing to the death of a person domiciled therein, of movable property locally situate outside the province at the time of such death. The decision in *Alleyn* v. *Barthe* [28] established that a transmission within the province required that the person to whom the property was transmitted must be domiciled in the province and that the Quebec law, by the wording of the statute, required that the deceased must also have been domiciled within the province. This rule was confirmed in *Provincial Treasurer of Alberta* v. *Kerr* [29] in which it was stated that a province was not entitled to impose a succession tax on personal property outside that province but was entitled to tax persons domiciled in the province for the transmission to them of personal property situated outside the province.

While double taxation was permitted in that the property transmitted might be taxed in one province and transmission of that property to the beneficiary might be taxed in another, attempts were made to prevent *multiple* taxation by agreeing upon a single situs for

[25] [1891] A. C. 476.

[26] *Attorney-General of Ontario* v. *Newman*, 31 O. R. 340, 345 (1899).

[27] [1912] A. C. 212.

[28] [1922] 1 A. C. 215.

[29] [1933] A. C. 710.

property, as property. One rule in this connection has been indicated above, that a simple contract debt had a situs at the domicile of the debtor. Such things as a bond under seal, a debt due from the King, and a debt arising under a statute, however, had been held to be "specialties" with a situs of their own where the instrument was found, and this designation was accepted into the Canadian inheritance tax law.

In the case of *Toronto General Trusts Corp.* v. *The King*[30] a mortgage on land was also held to be a specialty and thus taxable where found. But in this case the mortgages in question were executed in duplicate; one copy was retained by the registrar in Alberta, where they were executed and registered, and the other copy was held by the mortgagee and in his possession in Ontario at the time of his death. Both Alberta and Ontario sought to impose a succession duty. The Court found that at the date of execution of these mortgages, the mortgagors were resident in Alberta; the place of payment in each case was Alberta; the debts were secured, not only by personal obligation of the mortgagors but also by mortgages which created interests in land in Alberta. They were executed in the form prescribed by Alberta law and they derived their force and effect from that law; the administrator could not recover without benefit of Alberta law. It was held, therefore, that only Alberta, by virtue of whose law title was claimed, had jurisdiction to tax.

Bonds of the Dominion of Canada, not under seal, were declared specialties and taxable where found since they were statutory obligation of the Dominion.[31] Bonds of the Grand Trunk Pacific Railway Co. and of the Canadian National Railway Co., in possession of a resident of Ontario at the time of his death were more difficult to classify. The bonds of both railroads were guaranteed by the Government of Canada; in each case the bonds were secured by a general mortgage on all railroad property situated in several provinces. The Court found, in *The King* v. *National Trust Co.*,[32] that the bonds of the Grand Trunk Pacific Railway Co., apart from the guarantee, were evidence of a debt by statute and therefore specialties with a situs where found. The Canadian National Railway Co. bonds, on the other hand, evidenced what was basically an obligation of the company itself and therefore a simple contract debt. The bonds were primarily payable in New York where the trustees were located, but settlement of the debt would be in Ontario; therefore, the domicile of the debtor (the company's home office was in Quebec) could not affect the situs. It was held that since possession, in event of death, must depend on probate in Ontario a succession tax on these bonds could be imposed only by Ontario.

The judicial attitude toward double taxation was also expressed in the decision of this last-mentioned case:

> First, property, whether movable or immovable, can, for the purpose of determining situs as among the different Provinces of Canada in relation to the incidence of a tax imposed by a Provincial law upon

[30] [1919] A. C. 679.

[31] *Royal Trust Co.* v. *Attorney-General of Alberta*, [1930] 1 D. L. R. 868.

[32] [1933] 4 D. L. R. 465.

property transmitted owing to death, have only one local situation. . . . Situs, in respect of intangible property . . . must be determined by reference to some principle or coherent system of principles. . . . We think it follows that a Provincial Legislature is not competent to prescribe the conditions fixing the situs of intangible property for the purpose of defining the subjects in respect of which its powers of taxation under the British North America Act, 1867, s. 92 (2) may be put into effect.[33]

Jurisdiction to impose a succession duty on shares of stock rests with the province where the shares can be effectively dealt with. The case of *Brassard* v. *Smith*[34] involved shares of stock of the Royal Bank of Canada left by a decedent resident of Nova Scotia. Since the head office of the bank was in Montreal, the province of Quebec charged a succession duty on these shares. However, the shares in question were registered in the branch share-registry office in Nova Scotia, and by provision of the Bank Act of 1923 shares could be transferred only in the office where registered. Since these shares could be transferred (effectively dealt with) only in Nova Scotia, they were declared taxable only by Nova Scotia. Transfer in this case was held not to mean transmission upon death, but the "actual step which is necessary to invest the new holder."[35]

It was decided in *Re Macfarlane*[36] that when shares could be effectively dealt with in more than one place, including the province of domicile of the decedent owner, that the situs depended on the domicile of the decedent rather than the location of the head office of the company. The question still remains open, however, where the situs would be if the decedent owner were domiciled in a province where there was no transfer office but the shares could be effectively dealt with in any one of two or three other provinces. Shares of stock in Ontario corporations, held by residents of the United States, were ruled to be beyond the tax jurisdiction of Ontario since in each case the shares could be effectively dealt with in the United States.[37]

The Canadian estate and inheritance tax system can be summarized as follows:

1. The beneficiary is taxed on his inheritance, the tax to be paid before the property subject to tax can be distributed.

2. Immovable property is taxable only by the province within which such property is actually located. No province has attempted to tax its citizens because of the transmission to them of immovable property situated outside the province.

3. A simple contract debt is taxable by the province of domicile of the debtor.

4. A specialty debt has a situs of its own where the instrument is found.

5. Shares of stock are taxable by the province in which they can be effectively dealt with.

[33] *Ibid.*, p. 467.

[34] [1925] 1 D. L. R. 528.

[35] *Ibid.*, p. 531.

[36] [1933] O. R. 44.

[37] *The King* v. *Globe Indemnity Co.*, [1945] 2 D. L. R. 25. and *Maxwell* v. *The King*, [1945] 2 D. L. R. 35. It made no difference, in the latter case, that the transfer office was in New York and the decedent in Connecticut; the important consideration was that the shares did not have to cross the international boundary to complete the effective transfer.

6. *Mobilia sequuntur personam* still applies in the absence of specific rules to the contrary or in cases in which the specific rules cannot be employed.

7. Double taxation of movables is possible when the province of situs of the property and the province of domicile of the beneficiary are not the same.

III

It is too much to expect that the rules of the United States to the effect that the situs of a debt is the domicile of the creditor, or that shares of stock are taxable by the state of incorporation, would be discarded in favor of the Canadian rules. It is not beyond the realm of possibility, however, that the states might be permitted to superimpose upon existing death duties the Canadian system of taxing the beneficiary.

The *quid pro quo* doctrine, implied in many inheritance tax cases and explicitly stated in the case of *Treichler* v. *Wisconsin*,[38] may well open the way for an extension of multiple taxation by granting jurisdiction to tax to the state of domicile of the heir. The doctrine was clearly presented in *Union Refrigerator Transit Co.* v. *Kentucky*,[39] a property tax case:

> The power of taxation, indispensible to the existence of every civilized government, is exercised upon the assumption of an equivalent rendered to the taxpayer in the protection of his person and property, in adding to the value of such property, or in the creation and maintenance of public conveniences in which he shares, such, for instance, as roads, bridges, sidewalks, pavements, and schools for the education of his children. If the taxing power be in no position to render these services, or otherwise to benefit the person or property taxed, and such property be wholly within the taxing power of another State, to which it may be said to owe an allegiance and to which it looks for protection, the taxation of such property within the domicile of the owner partakes rather of the nature of an extortion than a tax, and has been repeatedly held by this court to be beyond the power of the legislature and the taking of property without due process of law.[40]

The application of this doctrine to inheritance taxes was restrictive rather than liberal. Ruling that Wisconsin could not levy an inheritance tax on tangible property located outside its limits, the Court said,

> Since the State of location has all but complete dominion over the physical objects sought to be measured for tax . . . no other State can offer a quid pro quo. . . . And if the State has afforded nothing for which it can ask return, its taxing statute offends against that due process of law it is our duty to enforce.[41]

However, if a person who lives in one state and earns income in another can be made subject to an income tax by both the state of his domicile and the state within which he earns the income, then surely a person who receives an inheritance from someone residing in another state could not object to having his inheritance subjected to tax by both the state of his domicile and the state of domicile of the decedent. Such a tax would be consistent with the *quid pro quo* doctrine, moreover, since the beneficiary would be deriving benefits from both states.

[38] 338 U.S. 251 (1949).

[39] 199 U.S. 194 (1905).

[40] *Ibid.*, p. 202.

[41] *Treichler* v. *Wisconsin*, 338 U.S. 251, 256-257 (1949).

In the case of a tax based on the value of an inheritance and levied upon the beneficiary, there need be no distinction between tangible and intangible property, movable and immovable property, bank deposits, bonds, or shares of stock. A state which taxes the income of its citizens earned in some other state makes no allowance for any part of such income not brought into the state of residence, for the income earner had the right, unimpeded by any law of the state of residence, to take home all the income he earned. By the same token, a person who receives property by inheritance has the opportunity to convert that property into cash and take it home with him, whether he desires to do so or not.

The dissenting opinion of Justice Holmes in *Safe Deposit & Trust Co. of Baltimore* v. *Virginia*[42] indicated the propriety of such a tax. Justice Holmes stated that taxes are on persons rather than on property. "The notion that the property must be within the jurisdiction puts the emphasis on the wrong thing. The owner may be taxed for it although it never has been within the State."[43]

What might be the multiple taxation possibilities in an extreme case? The beneficiary, since he could offer testimony as to his own intent, probably could not be claimed as a resident by more than one state. Real estate and tangible personal property would be subject to tax by the state of its actual location and the state of domicile of the beneficiary. Intangible property would be taxable by the state (or states) of domicile of the decedent, by the state of actual location or the state of business situs, and by the state of domicile of the beneficiary; and in addition, debts would be taxable by the state of domicile of the debtor, and shares of stock by the state of incorporation and perhaps by the state where the shares could be effectively dealt with.

In another of his dissenting opinions,[44] Justice Holmes, joined by Stone and Brandeis, advised that if the states want to avoid double taxation they should do it by understanding, by uniform legislation. It should not be done for them by the imposition of constitutional limitation of their freedom through judicial interpretation. Justice Frankfurter, in a concurring opinion to *State Tax Commission of Utah* v. *Aldrich*,[45] expressed the similar view that the wisdom of tax policy is something for the political branches to decide. Removal of double taxation can be accomplished by reciprocal agreements; that function is denied to the Supreme Court by the constitutional system.

If this and the *quid pro quo* doctrine accurately reflect the attitude of the present Court, one could almost hope that some state would impose an inheritance tax on its citizen beneficiaries and that the tax would be contested on constitutional grounds just to determine what stand the Court would take. But in all justice to the heirs of the wealthy, who have little enough left to them under the present laws, one might better hope that the Court will never be faced with the necessity of considering such a case.

[42] 280 U.S. 80 (1929).

[43] *Ibid.*, p. 97.

[44] *Baldwin* v. *Missouri*, 281 U.S. 586 (1930).

[45] 316 U.S. 174 (1942).

A COMMENT ON BUDGETARY IMPROVEMENT IN THE NATIONAL GOVERNMENT
(In Reply to Alice)

MICHAEL S. MARCH *

IN AN ARTICLE in this journal about a year ago, Mr. Herman C. Loeffler advanced some interesting proposals on the budgeting and accounting problems of the federal government.[1] This article raised a technical question of considerable importance to the budget process: should the federal budget be authorized by the Congress on an *obligation* or an *expenditure* basis? Mr. Loeffler argues persuasively that the present practice is confusing and proposes that only the expenditure basis be used. This approach is the one in use in Great Britain and the one practically unanimously indorsed by the authorities on budgeting whom he cites.

While Mr. Loeffler's criticisms have much substance, I am inclined to believe that his proposal would achieve a neat accounting solution at the expense of depriving the Congress of some of the real control over programs which it now exercises through the appropriation process. To add concreteness to my comments, an effort has been made to describe important technical characteristics of the federal budget in a simple manner and to illustrate them with recent figures. It is hoped, also, that this modest effort may provide students of budgeting a simple introduction to some of the complex issues of practical federal budgeting.

The Problem

The budget of the national government is big, both absolutely and relatively. For the fiscal year ending June 30, 1953, federal budget expenditures were estimated at $85.4 billion in the budget transmitted by the President to the Congress in January, 1952. This was estimated to be 29 per cent of our total national income in that year, or on a per capita basis, $538 for every person in the United States.[2]

* While the author has been a staff member of the United States Bureau of the Budget for six years and is now again with the Bureau, this article was drafted while he was on leave attending the Littauer School of Public Administration of Harvard University and the views expressed in it are entirely personal. The author would like to acknowledge his debt for critical comments on this paper in rough draft to various of his expert associates and, in particular, to Dean Paul H. Appleby of Syracuse University for encouragement on the whole idea.

[1] See Herman C. Loeffler, "Alice in Budget-Land," *National Tax Journal*, IV (March, 1951), pp. 54-64.

[2] *The Federal Budget in Brief*, fiscal year 1953 (Washington D. C.: Government Printing Office, 1952, price 20¢), presents many other facts in simple, graphic form.

The budget directly reflects the work program of the federal government. The activities of the government vitally affect every citizen. While the reactions of the citizens to the benefits of expenditures may be mixed, the response to the sacrifices required by the taxes necessary to finance the government is unequivocal. "Cutting the budget" bids fair to become a favorite national parlor pastime. But it is not an easy game. The abstract figure of $85.4 billion cited above attempts to summarize the multitudinous activities of a great leviathan extending in time measured by years and in space on a world-wide scope. Concerning these activities it is necessary, however, to reach a democratic consensus under a form of government where powerful checks are interposed between the executive and the legislature.

The budgetary process—the formulation, authorization, and execution of the budget—is a key process in a democracy. Our national budget system, however, dates back only to 1921 and its present state of effectiveness—judging by the widespread criticism—is low. The accounting system, above which no budget can rise, is inadequate and under divided direction. The budget document could be improved and the budget organization is understaffed in the executive branch and both poorly staffed and organized in the legislative branch.

This challenge of how to improve the budget process is not a recent one. It has been with us since the days of Hamilton and Jefferson, but most of the time it has not been clearly recognized. For many years it was not seen as a core process of decision about democratic objectives. Nor has the budget process in its more technical aspects been seen in the proper perspective, as V. O. Key pointed out in 1940.[3] The essence of budgeting is the priority problem—the allocation of scarce dollars among competing purposes. But, as Key has indicated, this has been neglected by the scholars of budgeting who have concentrated on more mechanical aspects of the art.

I believe this failure in perspective has also helped to vitiate efforts on the "practical" side. Budgeting has been dominated for years by what may be called the "economy and efficiency" approach. (Judging from recent experience this might be properly renamed the "cut-at-all-costs" approach.) The key actors in the financial process—especially those in the Congress—have emphasized narrow and detailed efforts to control spending. Congressmen have usually demanded, "We must cut out this duplication and waste, and balance the budget!" The theorist-technicians of budgeting—often acquainted primarily with local and state financial systems and dedicated to an accounting technique—followed up by finding that: "The budgeting and accounting system of the Federal Government is not on a *business-like* basis. This makes it impossible to ascertain promptly the exact condition of Treasury income and outgo at the end of the fiscal year and to identify the overlapping and waste.

[3] "The Facts of Budget Theory," *American Political Science Review*, 34, pp. 1137-44. Key cites the works of A. E. Buck and J. Wilner Sundelson as examples. For a little subsequent progress see "Symposium on Budget Theory," *Public Administration Review*, 10 (Winter, 1950), pp. 20-31. For shrewd integration of practical budget lore with economic theory see Arthur Smithies, "Federal Budgeting and Fiscal Policy," in *Survey of Contemporary Economics*, Howard S. Ellis, ed. (Philadelphia: 1948).

Improvements should be made so the Congress will know where the money is going. A better system of accounting. . . ." [4]

Lucius Wilmerding has documented the history of the failure of these efforts.[5] Comptroller General Lindsay C. Warren—the "watchdog" of the Treasury, and in 1945 the head of an agency of 14,000 people engaged in this sort of "control"—also has succinctly summed up the failure.

> However, with all the information the Congress is receiving as to budgetary requirements and expenditures, I have been forced to the conclusion . . . that Congress has no idea whatever how appropriated funds are spent.[6]

I believe that many of these efforts have suffered from poor diagnosis. In the following pages some of the characteristics of federal programs will be identified which should be taken into account in any further effort to revamp the national budget system.

Factors affecting the budget system. Budgeting on the scale required for the national government is necessarily a complex matter. An effectively functional budget system requires realistic answers to a number of questions along the following lines: What are the national objectives? How fast must they be reached? Who is best equipped to decide questions about them? What facts are needed in order to guide the decisions? Who is to carry out the decisions? What reports are necessary to assure that decisions are carried out?

It ought to be clear that, in a rapidly expanding government such as ours, the answers to such questions would change; the amount of delegation of authority in both policy-making and administration might increase. New problems, such as the increasing impact of government programs on the economy, might require new information. The composition of budget programs might change—e. g., emergence of "transfer" payments and "long lead time" procurement programs—and thus alter the character of financial controls required. The sheer complexity and size of the budget might also require a "different level" of review by the President and by the Congress.

To be sure, accounting and reporting are basic to the budget process and emphasis on this aspect over the years has been of value. But accounting and reporting systems have to be devised to fill the needs of the budget process, which must in turn be oriented to the needs of democratic decision-making.

[4] In seeming contrast, the Hoover Commission recommended that "the whole budgetary concept of the Federal Government should be refashioned by the adoption of a budget based upon functions, activities, and projects: this we designate as a 'performance budget.'" The mention of a budget by "functions" lends a hopeful tone to the pronouncement. But the commission limited its illustrative applications to the Navy Medical Service, the Forest Service, and the National Naval Medical Center at Bethesda which scarcely qualify as "functions" from the over-all governmental viewpoint. For lack of evidence to the contrary, one must reluctantly conclude that the commission was chiefly concerned with the mechanical problem of a budget based on firm unit costs and that it was unsuccessful in rising far above the "economy and efficiency" tradition. See Commission on Organization of the Executive Branch of the Government, "Budgeting and Accounting" (Washington D. C.: Government Printing Office, 1949), p. 8 ff.

[5] Lucius Wilmerding, Jr., *The Spending Power* (New Haven: 1943).

[6] Joint Committee on Organization of Congress, 79th Cong., 1st sess., Hearings on H. Con. Res. 18, March 13 to June 29, 1945, p. 529.

One purpose here is to reiterate the need for rethinking the (often implicit) assumptions of budgeting *theory*, as well as the mechanics, to take account of the changes in the size, composition, and temporal characteristics of the federal program as well as of the advances in theories of fiscal policy and responsible government. The government with a budget of three billion dollars when the Budget and Accounting Act first came into force had problems of a different order from those of today's government with its $85 billion outlay.

TABLE 1

FEDERAL BUDGET RECEIPTS, EXPENDITURES, AND NEW OBLIGATIONAL AUTHORITY, FISCAL YEARS 1950–1953,* BASED ON EXISTING AND PROPOSED LEGISLATION

(In Billions)

Description	1950 Actual	1951 Actual	1952 Estimated	1953 Estimated
1. Budget Receipts	$37.0	$48.1	$62.7	$71.0
2. Budget Expenditures	40.1	44.6	70.9	85.4
3. (a) Budget Surplus	...	3.5	...	...
(b) Budget Deficit	3.1	...	8.2	14.4
4. New Obligational Authority	$50.2	$84.1	$93.4	$84.3

* Prepared from *The Budget of the United States Government for the Fiscal Year Ending June 30, 1953*, pp. A5–A6, and from *The Budget for the Fiscal Year Ending June 30, 1952* (Washington, D. C.: Government Printing Office, 1952), pp. A5–A6.

Federal Budget Concepts

To help provide an understanding of the practical aspects of federal finance, a few of the concepts used in the budget for the fiscal year ending June 30, 1953, will be illustrated with figures: [7]

Budget totals. The federal "budget total" covers only transactions in "federal funds," including transactions in business enterprise funds on a net basis, but excluding trust and deposit funds. Budget receipts of the government are reported on a collection basis and expenditures are reported mainly on a checks-issued basis. The difference between budget receipts and expenditures in the "federal funds" is the "budget deficit." For the four fiscal years 1950-1953 these totals are shown in lines 1-3 in Table 1.

Budget authorizations versus expenditures. The significant thing about the federal budget, however, is that the Congress does not directly authorize expenditures.[8] Instead, it authorizes "new obligational authority," shown in line 4 of Table 1. New obligational authority comprises the authority granted to agencies to incur financial obligations—that is, to make binding commitments on the government by contracts for deliveries of goods and services or by hiring personnel. Expenditures usually

[7] The concepts discussed in this part are covered more fully in *The Budget of the United States Government for the Fiscal Year Ending June 30, 1953* (Washington D. C.: Government Printing Office, 1952), pp. A3 and A4. Hereafter cited *Budget, 1953*. See also description of concepts in Joint Committee on the Economic Report, 82d. Cong., 2d sess., Hearings on the January 1952 Economic Report of the President, pp. 81-85.

[8] The effort of the House of Representatives to set an expenditure ceiling for the Department of Defense military programs for the fiscal year 1953 perhaps indicates how some measure of direct control over expenditures might be achieved by the Congress.

follow obligations since, as a rule, payments of bills are made only as goods are delivered or services are rendered pursuant to contracts.[9]

The lag of expenditures behind authorizations or obligations may be very substantial. For example, the average duration between initial contract and delivery of military aircraft runs to about 30 months, according to testimony by the Director of the Budget.[10] The lag for the total budget is, of course, less, but it is substantial. Of the total budget expenditures of $85.4 billion estimated for fiscal 1953, about $41.8 billion will be expenditures from obligational authorizations enacted in *prior years* while $43.6 billion will be from new obligational authorizations *for* 1953.[11] Correspondingly, of the $84.3 billion of new obligational authorizations recommended for 1953, as shown in line 4 of Table 1, only $43.6 billion are estimated to result in expenditures in 1953 while the remaining $40.7 billion will lapse or carry over for expenditures in later years.

If the point of Mr. Loeffler's plaint is that there is a big spread between the new obligational authority Congress enacts and the performance of agencies as measured by expenditures, he is well substantiated. By summing the figures in Table 1 for expenditures and new obligational authorizations for the four years, and then taking the difference, we see that the "lead time" *added* for all government agencies in just these four years will amount to $71 billion. This, plus whatever unexpended authorizations were available on July 1, 1949, indicates an average lead time of at least twelve months for the whole budget. Theoretically the government could run for a year without another dollar of authorizations, although this would require entirely unrealistic assumptions.

But this does not make Mr. Loeffler and all the other proponents of having Congress enact the budget on an expenditure basis automatically right.[12] Practices of the sort they question may be abused, but they usually have some organic basis. It would be a reasonable hypothesis that the necessity for "lead time" in budget programs has increased greatly in the last ten years with the increase of heavy procurement, especially for military and international aid programs. If, on the average, contracts have to be let a year in advance of expenditures, would it be effective to try to control the budget on an expenditure basis? Mr. Loeffler's answer is that he would make the contracts on a contingent basis. This would, of course,

[9] As a matter of actual practice the stages of "apportionment" of the authorizations by the Bureau of the Budget and "allotment" and "obligation" by the agencies intervene between "authorization" by the Congress and final "expenditure." Also, before financial "authorizations" are made, the purposes for which money is to be spent must be approved by substantive or basic legislative authority.

[10] Joint Committee on the Economic Report, 81st Cong., 1st sess., Hearings on the January 1951 Economic Report of the President, p. 40.

[11] *Budget, 1953*, page A-6.

[12] It is interesting to note that, although the Hoover Commission Task Force on budgeting and accounting supported an idea akin to Mr. Loeffler's (the lapsing of appropriations within three or four months after the end of a fiscal year) for the usual academic reasons, this approach is not to be found in the report of the commission itself. Cf., Commission on Organization of the Executive Branch of the Government, "Task Force Report on Fiscal, Budgeting, and Accounting Activities," p. 77, and Commission report on "Budgeting and Accounting" (Washington D. C.: Government Printing Office, 1949).

mean that the contractors would pad their prices to the government to include a risk premium against contract cancellations. Would such a gain in "control" over expenditures be worth the cost?

Types of obligational authorizations. Thus far, only the total of "new obligational authorizations" has been mentioned. But there are several main types of authorizations which in turn vary in their terms such as duration of availability, definiteness or indefiniteness of amount, and so forth. The magnitudes of the main types of authorizations might be illustrated with figures from the 1952 and 1953 budgets. (See Table 2.)

There are three main categories of authorizations used in the budget:[13] (1) Those which empower to make both obligations *and* expenditures: i.e., most *appropriations, authorizations to expend from public debt receipts,* and most *reappropriations* are of this nature. (2) Those which empower to incur obligations *but not* to make expenditures: i.e., *contract authorizations* which require subsequent appropriations to liquidate them. (3) Those which empower only to make expenditures: i.e., *appropriations to liquidate prior contract authorizations.*

As can be gathered from Table 2, the bulk of the authorizations are in the form of "appropriations." "Authorizations to expend from public debt and corporate debt receipts" authorize expenditures from money which the Treasury or a government-owned corporation is directed to borrow. They are usually used for "self-liquidating" programs, such as those of government corporations, although this rule has

TABLE 2

SUMMARY OF BUDGET AUTHORIZATIONS BY TYPES, FISCAL YEARS 1950–1953,* BASED ON EXISTING AND PROPOSED LEGISLATION

(In Billions)

Description	1950 Actual	1951 Actual	1952 Estimated	1953 Estimated
1. Appropriations	$40.3	$81.6	$92.0	$85.5
2. Reappropriations	.5	1.0	.9	†
3. Authorizations to Expend from Public Debt and Corporate Debt Receipts	7.5	2.8	2.7	1.5
4. Reappropriations of Authorizations to Expend from Public Debt Receipts	...	†	†	...
5. Total New Authorizations for Expenditures	$48.3	$85.4	$95.6	$87.0
6. Add: Contract Authorizations	4.9	3.0	.6	.5
7. Add: Reauthorization of Contract Authorizations	...	.1	.1	...
8. Deduct: Portion of Appropriations for Liquidation of Prior Contract Authorizations (included in line 1)	3.0	4.4	2.9	3.2
9. Total, New Obligational Authority	$50.2	$84.1	$93.4	$84.3

* Prepared from *Budget, 1952,* pp. A10–A11 and *Budget, 1953,* p. A-6.

† Less than $50 million.

[13] *Ibid.,* pp. A3-A4.

been violated.[14] Perhaps an added advantage to the agencies of " public debt authorizations " is that they can be enacted in basic legislation and thus sidestep the appropriations committees. " Contract authorizations " are used to empower agencies to incur commitments on long lead time programs for which actual expenditures are not to be made until a subsequent fiscal year. This enables a deferment of appropriations and thus permits the Congress to review the program at a subsequent stage (although its ability to control the program may be extremely limited by the time expenditures materialize and appropriations are necessary). It also enables the Congress to authorize a program without adding to the total of immediate appropriations (an argument which derives its chief weight from considerations of expediency and also from the mistaken notion that somehow appropriations are " cash ").[15]

Table 2 shows that keeping tabs on authorizations enacted by Congress is a relatively complex bookkeeping job. As a matter of practice, the reports of appropriations committees indicate that the Congress has just begun to cope with the problem. As a rule, committee reports and debate have focused on " appropriations," and claims of cuts in the President's budget have been made on this basis. In past years such record-keeping on a partial basis has resulted in public claims of budget cuts, when actually the appropriations cut out were replaced by contract authorizations or by other means. But the more serious result has been that the Congress has had to operate with inadequate information as to the status of its actions in relation to the President's budget recommendations, not only with reference to expenditures but also to authorizations. Even the budget document has introduced the concept of " new obligational authorizations " only in the last few years. Similarly, only in recent years have side tabulations of " contract authorizations " made their appearance in congressional reports.[16]

For this multiplicity of authorizations in the past the executive branch and the Congress must share the responsibility. The use of these different devices, often to overcome political situations, has led to confusion and has undermined control over programs. It has also resulted in needless expense for record-keeping. After reviewing the situation, the Hoover Commission recommended " to Congress that a complete survey of the appropriation structure should be undertaken without delay." [17]

The solution adopted by the House Committee on Appropriations was more direct. In 1946 the committee had eliminated certain contract authorizations from the Naval Appropriation Bill for the fiscal year 1947 with the following explanation:

[14] Committee on Expenditures in the Executive Departments, U. S. Senate, 82d Cong., 1st sess., Hearings on S. 913, pp. 142-146. (Washington, D. C.: Government Printing Office, 1951.) These hearings contain much useful information on fiscal control problems of the government.

[15] The idea is incorrect because the Treasury does not " finance," i.e., tax or borrow, on the basis of *appropriations* enacted but rather on the basis of what it estimates *expenditures* will be.

[16] For example, see House Report 1797, 81st Cong., 2d sess. on the General Appropriation Bill, 1951.

[17] " Budgeting and Accounting," *op. cit.*, p. 13.

A policy has apparently become ingrained in the administration of certain Navy projects of requesting contract authority which, when given and exercised, obligates the Government to make appropriations in the future to carry out the legal obligations growing out of commitments made pursuant to the grant of contractual authority. The result of this procedure is to lend complete confusion to Government financing and accounting and to confuse the public mind as to the true fiscal status of the Government. The committee believes that this system of granting contract authority is fundamentally wrong and that the Government should deal on a strictly cash basis. It is true that it is not always possible, where a long lead time for production is required, to spend all the funds appropriated in any one year for the complete liquidation of a given contract. However, in a few instances where this contingency must be met, the problem can be solved by making the appropriation for the complete liquidation of the contract extend for such period of time beyond the fiscal year as is necessary to complete such liquidation.[18]

No consistent practice followed this statement in 1947; in fact, in succeeding years some appropriations were converted into contract authorizations. In the report on the General Appropriation Bill, 1951, however, the House Committee repeated and generalized its dictum:

During the past few years it has become the rather general practice to submit to Congress, in the annual budget, requests for contract authorizations rather than for cash appropriations for large items which might extend beyond the first year of operations. This has resulted in committing the Federal budget to substantial expenditures several years ahead. It is therefore the desire of the committee that the budget hereafter avoid the use of contract authorizations and submit requests for direct appropriations in lieu thereof.[19]

As a result of this caveat the 1952 budget was placed on an appropriation basis, although it carried permanent contract authorizations totaling about $0.6 billion on the basis of legislation enacted in prior years, as can be seen in Table 2. In the 1953 budget, however, a partial return to the use of contract authorizations was indicated by the inclusion of $0.4 billion of proposed new contract authorizations for highway construction. As long as the rules of the Congress do not require all financial authorizations to go through the appropriations committees, contract authorizations and loan authorizations are likely to crop up in the laws and continue to confuse score-keeping on the budget.

Obligational and expenditure availability of budget authorizations. The terms of authorizations differ as to their period of availability for purposes of obligation and expenditure. The most common type of authorization is the so-called "annual" appropriation which is available for obligation for one

[18] Naval Appropriation Bill, Fiscal Year 1947, Report No. 2085, 79th Cong., 2d sess., pp. 7-8. The Committee's phrase "strictly cash basis" actually means "strictly appropriation basis." Pleaders before the Congress for contract authorizations help foster the fallacy that somehow *appropriations* are cash, while *contract authorizations* are not. Neither are cash; both obligate the government. "Appropriations to liquidate prior contract authorizations" are generally given little actual consideration by the Congress since they are recognized to be uncontrollable—obligations must be paid as they come due. Thus contract authorizations (as well as public debt authorizations) are a back-door way to get obligational authorizations when more forthright approaches are barred.

[19] House Report 1797, 81st Cong., 2d sess., p. 4.

year and for making payments on such obligations for an additional two years. A hypothetical illustration of a new program financed on this basis might be as follows (assuming a yearly appropriation of $100 million, of which $2 million lapse in each of the first two years):

Obligations		Expenditures				
		Year				
Year	Amount	1	2	3	4	5
1	98	60	30	8	..	..
2	98	..	60	30	8	..
3	100	..	..	20	70	10
4	100	..	..	..	60	30
5	100	..	..	..	..	60
Total		60	90	58	138	100
Memorandum:						
Balance at end of year available for future expenditure		38	46	88	50	50

The annual appropriation has a number of weaknesses which often have been criticized.[20] Three sets of accounts have to be kept during any year and must be referred to in order to obtain the total of expenditures in any one year (see third, fourth, and fifth years above). Appropriations do not precisely control the timing of expenditures since once the agency has properly obligated the funds they continue available for at least two more years (e.g., note how with a constant appropriation, expenditures drop and rise in third and fourth years).

Annual appropriations are almost always used for operating or administrative expense programs which have no real need for a long carry-over. For such programs there is undoubtedly much merit in the proposals often advocated for terminating the expenditure availability of appropriations within a period shorter than two years.[21] Whether the proper period is 90 days or twelve months ought to be determined by the needs of the government programs and of government suppliers as well as considerations of accounting control.

Annual appropriation accounts constitute the bulk of the grist for the congressional appropriations committees. In 1940 it was reported that 1,700 accounts were being set up each year,[22] although the number now is probably down to 400 accounts as the result of consolidations following the Hoover Commission recommendations. In terms of amounts, however, annual appropriations in 1953 cover only about three-fifths of all budget authorizations.

There are other types of authorizations which are not subject to annual action by the Congress because they are available on a multiyear or no-year (until spent) basis. The no-year authorizations, in particular, while not numerous in relative numbers, account for a substantial segment of the budget total. Precise figures are not at hand, but a rough tabulation of budget recommendations for 1953 indicates that

[20] For example, see A. E. Buck, *Public Budgeting* (New York: 1929), pp. 525-526; also Herman C. Loeffler, *op. cit.*

[21] The lag of expenditures behind obligations for personal services, printing, travel and transportation expenses was estimated in 1947 to range from 15-140 days by the then Assistant Director of the Bureau of the Budget. See Subcommittee of the Committee on Rules and Administration, United States Senate, 80th Cong., 1st sess. (Washington, D. C.: Government Printing Office, 1947), Hearings on S. Con. Res. 6, pp. 21-22.

[22] Joint Committee on Organization of Congress, *op. cit.*, testimony by Lucius Wilmerding, p. 973.

of the total $84.3 billion of new obligational authorizations, around $25 billion is in no-year accounts—to remain available for obligation and expenditure until spent.[23] Most of these authorizations are for military procurement and for civil public works—all characterized by extremely long lead times—as well as capital funds for business enterprises and revolving funds. Some are for programs uncontrollable by normal action in the appropriation process, such as the veterans pensions and readjustment benefits programs.

A third group of authorizations almost entirely escapes budget review by the appropriations committees of the Congress and is not even included in appropriation bills. These are the "permanent" appropriations and contract authorizations which have been criticized many times by the Congress, but nevertheless continue. Out of about $7.0 billion of permanent obligational authorizations included in the budget for 1953, interest on the public debt accounts for $6.2 billion although in the remaining balance of $0.8 billion there are numerous small accounts.[24]

Control of the Budget: Why it is Easier Said Than Done

The foregoing description should help make it clear that control of the federal budget is not a simple matter. The present practices have their historical roots, some in the rich soil of experience, some in expediency. If the President is to plan the government's program properly as a whole and the Congress is to exercise effective control over the budget, it is evident that some uprooting and transplanting will be necessary. But before digging in, it might be useful to inquire more precisely where improvements can be made with reasonable success and exactly what we hope to accomplish.

One approach to the matter is to identify the objectives of budgetary control since they may help indicate what tools are needed. For our purpose three aproaches to the problem of budgetary control will be sketched with the needs of the Congress in mind.

Misdirected control. A sound way to appraise the validity of a proposed budgetary gadget is to examine the value system of its architect. Budget systems are not neutral. They are designed on the basis of particular presuppositions as to the objectives of budget control, although these assumptions may be implicit rather than explicit. Different architects of budgetary systems may espouse different sets of values, and for this reason may have trouble in agreeing on a common blueprint.

The preconception of an annually balanced budget underlies many proposals for "improvement" of the federal budget system. Adherents of this criterion often disregard broader and more worth-while objectives of fiscal policy. Thus they may give undue emphasis to this rule in their attempts to devise mechanisms for attaining an exact annual balance.

As the understanding of fiscal policy grows, the prevailing values in budgetary theory also change, as has been the case with the criterion of an annually balanced budget. The actions

[23] *Budget, 1953.*

[24] For listing of types of items see *Budget, 1952,* pp. 1001-1005; also for discussion refer to memoranda in Committee on Expenditures in the Executive Departments, *op. cit.,* pp. 142-146.

of first Director of the Budget, General Dawes, might well have comprised the basis of the dictum in A. E. Buck's respectable *Public Budgeting* (1929) that:

> . . . the budget . . . should present a *balanced* plan for financing the government. But this is not all. The equilibrium of this plan, as between income and outgo, should be maintained during the entire period of its execution.[25]

The Bureau of the Budget is not noted for its lack of adherence to the "principle of parsimony," yet in 1949 the then Director, Mr. Frank Pace, Jr., testified:

> . . . we subscribe to the principle of the balanced budget as a yardstick. [But] Fundamentally, we feel that our planning for balancing budgets would be shortsighted if we restricted it to any given fiscal year because it must relate itself to both an economic cycle and to international commitments.[26]

Budget control is certainly necessary if used for well conceived purposes. A measure of budget control is, in fact, indispensable. Yet it would be interesting to study the origins of such efforts as the legislative budget to see to what extent their chief architects were slaves to now defunct theories. In the same vein, a critical examination of the theoretical, as well as practical, soundness of existing and proposed budgeting gadgets would be useful. The question to ask in such a review is: How precise should the control be and how much control can be exercised at the appropriation stage without disrupting orderly government processes?

Impracticable control. There is a tendency to expect too much of budgetary control or to expect certain budgetary tools to accomplish more than they are capable of doing. We have already alluded to the disappointments of the "economy and efficiency" school. But it is hard to see how the result could have been otherwise; accounting checks suitable for fidelity purposes are certainly inadequate to enforce political (or even program planning) responsibility. In fact, overselling of inadequate tools may mislead the public and actually foster irresponsibility in broader respects. A microscope is a poor substitute for an astronomical telescope for macroscopic work.

The basic concept of the "performance budget"—cost per unit of work done—is certainly useful, but in any practical sense it is still directed to microscopic use in the federal government. Indeed it might be interesting to figure out how valid it is as a solution for the "budget problem." In the end, would the government actually spend less for the following purposes than it does now if the Congress had unit cost figures which showed that (figures used are approximate): per patient day costs in Veterans' Administration hospitals were $19 compared to $15 in other government hospitals? B-36 airplanes cost $3,500,000 each? The current rate on 15-year bonds was 2¾ per cent, up ¼ per cent in the last year? These questions, by the way, lead to some of the biggest functional programs in the budget.

[25] P. 452.

[26] Joint Committee on the Economic Report, 81st Cong., 1st sess. (Washington, D. C.: Government Printing Office, 1949), Hearings before the Subcommittee on Monetary, Credit, and Fiscal Policies, p. 515.

Some of the strongest demands for "economy and efficiency" have come from members of the Congress, yet there is another familiar side to the story, as Lucius Wilmerding said to one committee:

> Congress is not the sparing, saving, economical body that it is sometimes represented to be in the textbooks; it is—let me put the matter bluntly—a body of spenders, just as apt to be extravagant as the Executive, perhaps even more apt.
>
> . . . Legislative extravagance is not an American invention. It is part and parcel of the system of democratic government. . . .
>
> It is not only that the psychology of Congress is unfavorable to the affecting of particular demands. It must be remembered that, while everybody desires economy in the abstract, everyone is prepared to recommend one special increase of expenditure at least in a direction which appears to him to be useful. . . . [As a result] abstract proposals for economy will give way to concrete proposals for increased expenditure.[27]

The real need of the Congress (as well as of the President) is for some genuine macroscopic scales which can be used to weigh the desirability of various diverse expenditures and to balance accurately the sacrifices of foregoing further spending against the pains of additional taxation or inflation. Those who pretend to know the answer down to the last billion dollars on what is good for the country have more confidence than present fiscal tools warrant.

This problem of insensitive indicators and blunt tools is further complicated by the practical problem that a large proportion of the budget in any given year rests on continuing commitments, both of a financial and policy nature, which make sharp changes difficult or even impossible. Despite great verbal furor, presidential budgets are not greatly altered by the Congress. The changes made are not all downward. The Congress adds to the authorizations, sometimes in amounts running into hundreds of millions of dollars. The interesting question is: Why does not the Congress make large cuts? The answer in generalized form is that the budget is not made from scratch each year; it involves commitments which are, for practical purposes, uncontrollable through the annual appropriation process.

The foregoing point has been made many times by government officials,[28] but it is not yet recognized widely enough. The permanent appropriations, such as for interest on the public debt, have already been mentioned. They are regarded as so completely uncontrollable that the Congress does not even bother to look at them each year. There are also other programs for which the basic statutes fix unequivocal requirements on the government to spend by setting the terms on which benefits to applicants are to be provided. These include grants-in-aid to states for public assistance, veterans' pensions and readjustment benefits, and similar programs.[29] The bulk of these

[27] Subcommittee of the Committee on Rules and Administration, *op. cit.*, pp. 54-55.

[28] See testimony of F. J. Lawton, Director of the Bureau of the Budget, in Joint Committee on the Economic Report, 82d Cong., 1st sess. (Washington, D. C.: Government Printing Office, 1951), Hearings on the January 1951 Economic Report of the President, pp. 37-106. See also Joint Committee on the Economic Report, Hearings before Subcommittee on Monetary Credit, and Fiscal Policies, *op. cit.*, pp. 501-529.

[29] Joint Committee on the Economic Report, 82d Cong., 1st sess., *op. cit.*, pp. 44-47, and 68. Also

funds are provided through " no-year " appropriations. Control through ordinary appropriation processes is not practicable over these two segments of the budget, accounting for over $14 billion of expenditures in fiscal 1953. Indeed, expenditures for some of these programs tend to fluctuate markedly but inversely to fluctuations in the level of economic activity. The same is true of important programs financed with so-called nonappropriated, no-year funds, such as the Commodity Credit Corporation agricultural price support program. If these fixed and continuing commitments are to be changed, action by the legislative committees rather than the appropriations committees of the Congress would be required in most instances. Expenditure controls on such programs under present basic laws would be impracticable.

A look at the budget from the standpoint of major functional categories of expenditure indicates how policy commitments tend to bind the budget-cutter. For fiscal 1953 the budget expenditures for the " military services " and " international security and foreign relations " functions are estimated at $62 billion, or nearly 73 per cent of all budget expenditures. These expenditures, of course, depend on the necessities of world situation rather than on domestic financial or economic considerations. Effective budgetary control in these areas depends upon effective policy-making and execution.

Moreover, just from the technical standpoint of budgetary controllability, the above-mentioned functions are a big area of inflexibility. To the extent that part of the substantial number of military and civilian personnel might be discharged on relatively short notice, the trend of expenditures might be changed. But these functions also include many heavy procurement and construction programs which require a long lead time between obligations and expenditures. Indeed, of $62 billion to be expended in 1953 for these two functions, more than $35 billion will be from prior year authorizations. In the four years, 1950-1953, the carry-over of obligation authorizations in these two functions will have been increased by roughly $60 billion.[30] The lead time in particular programs in this total is indicated by the fact that of obligational authorizations of $14.5 billion for Navy and Air Force aircraft procurement in the budget for 1953, expenditures of only $0.6 billion are shown in 1953.[31] If drastic adjustments via contract cancellations are to be avoided in these procurement programs, budget changes must be initiated one, two, or even three or more years in advance.

The budgetary controller faces a dilemma with respect to these procurement programs if he attempts to obtain precise control of expenditures. He can fix a top limit by limiting obligations, although if the agencies obtain more slack than they need for effective operation, control is impaired. On the other hand, precise expenditure control is limited. Deliveries on procurement contracts are uncertain within wide limits since they depend on conditions

refer to tabulation of budget items by controllability categories in Joint Committee on the Economic Report, 82d Cong., 2nd sess., Hearings on January 1952 Economic Report, pp. 467-486.

[30] *Budget, 1952* and *1953*, derived from Tables 1 and 2.

[31] *Budget, 1952*, pp. 646-647 and 666-667.

in industry which are largely beyond the control of the government.

When Mr. Loeffler proposes a budget based on expenditures he really does not face up to the fact that a large proportion of the budget is made up of programs in which expenditure control is not feasible. Moreover, he does not propose to curtail the carry-over of authorizations, since he would in fact expand the use of contract authorizations. The net result, it seems to me, would be to focus the attention of Congress on a less controllable stage of the budget process and also to continue to confuse appropriation score-keeping by retaining several forms of obligational authorizations.

Review and control for policy. The budget is the sum of many decisions over a number of years by Congress and the executive branch, and also by the courts. It is not possible to make these decisions all over again, or even to review them in the course of the annual appropriation process. But while most decisions of the government eventually come home to roost in the budget, this fact is not always given proper weight. For example, the 1952 budget for consideration by the Congress included expenditures of $7.6 billion for legislation enacted by the 80th and 81st Congresses, exclusive of military services for which figures were not available.[32] This shows that the Congress does review programs and policies, although it may do so outside the appropriations committees, and although the perspective in which it does so may need improvement. If consistency and balance are to be obtained in the government programs, the Congress, as well as the executive branch, will have to give real consideration to the budgetary consequences of proposed substantive legislation while it is being drafted and enacted.

Responsibility for the budget is shared by the President and the Congress. If the Congress is to make effective its ultimate responsibility for the control of the purse strings, it must operate on a level commensurate with that responsibility. This means that the Congress will have to give much more emphasis to the program aspects of the budget as contrasted to the administrative expense items.

Economy and efficiency—in the sense of not spending wastefully and of getting the most out of what is spent—certainly comprise a significant criterion, but should not be the only one. The Hoover Commission performed a valuable service in stressing the need for better budgetary tools and organization. The Congress can give powerful impetus to efforts in this direction on the part of the executive branch, but most of the actual work will have to be done in the executive branch. However, much of this work is being done effectively already. The "soft spots" in the budget subject to discovery by ordinary budgeting techniques are fairly well screened out by the series of reviews within the agencies and in the Executive Office of the President before the President submits his budget to the Congress. In this process it is not unusual for requests running into billions of dollars in a single year to be withdrawn by the agencies or to be disallowed by the Bureau of the Budget and the President. This review tends to

[32] Joint Committee on the Economic Report, 82d Cong., 1st sess., *op. cit.*, p. 51 ff.

eliminate most of the obvious soft spots in the administrative expense requests, as well as to work the substantive program requests down to a relatively firm level.

It is, therefore, perhaps no wonder that the detailed search for economies by the Congress generally ends in small results and occasionally in recourse to arbitrary, flat percentage cuts. This causes much genuine but needless frustration among members of Congress. Many in the Congress could put their aspirin bottles on the shelf in budget season if they could bring themselves to recognize that the budget today is a "program budget" rather than just an "administrative expense" budget. The big expenditures in the budget are for substantive programs. Military services, international aid, veterans' services and benefits, and interest on the public debt—which are the costs of current defense and of past wars—account for about $72.5 billion or 85 per cent of the budget expenditures estimated for 1953. Most of these expenditures consist of program as contrasted with administrative expense outlays. The bulk of the remaining $12.9 billion is for aids to and development of transportation and communication, natural resources, agriculture and agricultural resources, and for social security, welfare and health benefits.[33] A substantial proportion of the expenditures in these last four functional categories is defense related—as for atomic energy, power facilities, and roads.

Instead of concentrating on substantive policies, political discussion of the budget often proceeds on a misleading or misinformed basis. A favorite point of attack is the number of civilian government employees, as though *all* federal expenditures were for personnel. But this is far from the case. For example, for fiscal 1952 it was estimated by the Director of the Bureau of the Budget that federal civilian employment would be about 2,700,000.[34] This would mean a payroll of around $9 billion. Since the postal workers are largely paid from postal revenues, the civilian payroll reflected in budget expenditures would be about $7 billion—or only $1 out of every $10 to be spent in fiscal 1952. The congressmen who spend all their time poring over lists of personnel in the budget are only one-tenth effective in examining the budget. A related error is the failure to realize that government personnel are predominantly in programs which are controllable only within narrow limits or are whole-heartedly sanctioned by the Congress and the public. On December 31, 1950, three out of every four civilian federal employees were employed by the Department of Defense, the Post Office Department, and the Veterans' Administration.[35] It is also instructive to contrast the difference in political attitude toward civilian personnel and military personnel; the need for the latter seems better appreciated. Although military personnel cost the government more in pay and maintenance for comparable grades than civilian employees, and despite the relatively large number of uniformed personnel (e.g., estimated at 3,500,000 for 1952), there is usually little arbitrary criticism.

[33] *The Federal Budget in Brief, 1953, op. cit.*, pp. 8-9.

[34] Committee on Expenditures in the Executive Departments, *op. cit.*

[35] *Ibid.*, p. 135.

But if the Congress as a body does not understand these points, the executive branch indeed has no one to blame but itself. The budget document is filled with detailed schedules showing the funds required by "object," but no comprehensive summary is provided on this basis to show that the "personal service" outlays for federal civilian employees are only a small fraction of the total.

Thus the main point about the composition of the budget stands out—the big money is program money, not administrative expense. The latter can be cut, but the relative amounts are bound to be small. Big budget savings or increases are in the substantive programs. These programs are the ones that involve the policy issues which the Congress will have to face if it is to be effective in discharging its constitutional responsibility to the people. To do this, I believe, the Congress must look upward at the broad picture rather than downward at the details. It must take the broad view, for only in this way can it make a policy review of competing proposals in terms of the priorities among major functional programs and in terms of over-all national security, economic, and fiscal considerations. The budget sums up nearly all of our national policies, and it can only be reviewed properly in this programmatic context. In the words of one of the greatest Directors of the Bureau of the Budget, "We must learn to think of the budget as a living process of democratic policy formation and policy execution." [36]

[36] Harold D. Smith, *The Management of Your Government* (New York: 1945), p. 99. Committee on Expenditures in the Executive Departments, *op. cit.*, likewise contains valuable discussion relating to a proposal to create a Joint Committee on the Budget; see especially pp. 125-146. Also see the viewpoints expressed by Clinton Fielder, on "Reform of the Congressional Legislative Budget," *National Tax Journal*, IV (March, 1951), pp. 65-76; and Edward C. Banfield on "Congress and the Budget; A Planner's Criticism," *American Political Science Review*, 43 (December, 1949), pp. 1217-1228. Earlier articles by Jesse V. Burkhead on "Budget Classification and Fiscal Planning," *Public Administration Review*, VII (Autumn, 1947), and on "Federal Budgetary Developments: 1947-1948," *Public Administration Review*, VIII (Autumn, 1948), should also be consulted.

Conclusions

It is beyond my scope to try to outline here a plan for the transformation of the budgetary process so that the "will of the community" can be more fully reflected through it. This would lead not only into questions of the form and content of the budget document but also into the matter of improvements in the organization of the Congress and, indeed, of the whole government and the whole political organization. Certainly, one of the main problems faced by the Congress today is that it lacks the organization and means to evaluate and assimilate the information and facts coming to the committees.

In the light of what has been said above, emphasis on certain features in the budget presentation would be indicated. The main framework should be on the *functional* basis in the true sense of the major purposes of the government, but with "bridges" to agency programs. A budget with programs as complex and diverse and economically significant, however, cannot be adequately described from only one angle. Secondary classifications on a summary basis are needed to show for what the money is spent (objects), who the recipients are (individuals, business,

farmers, etc.), where the recipients are (state-by-state in so far as feasible), and so forth. Not only must the revenue-expenditure picture be presented, but also the relation of the government's budget to the nation's economic budget.[37] Similarly, the connection between the government's credit and debt management policies and its budget policy needs to be unequivocally stated with quantitative data wherever technically feasible. Proposed legislation should not be left out of consideration. Only when the complete picture is provided in an integrated and comprehensive manner will the Congress be able to conduct an effective review. Moreover, the budget presented in this fashion should be viewed not for one year alone, but in relation to past and future years, and in the light of the needs of the nation for national security, economic development, and economic stabilization.

Mr. Loeffler's proposal. To those who have followed the description above of the gap and lag between obligational authorizations and expenditures, the carry-over of obligational authorizations from year to year, and the multiplicity of types of authorizations in the present budgetary system, Mr. Loeffler's solution cannot help being attractive. Surely congressmen (as well as their constituents) would understand much better what they were voting for if they were balloting directly for *expenditures* which could be compared with *revenues* to get the budget deficit or surplus. This would be much clearer than the present arrangement where they vote for obligational authorizations, some of which are expended in the budget year and large proportions of which are carried over for expenditure (and even obligation) in the next two or three years or more.

So far, so good. It would appear that, at least in the budgetary field, the present-day trend of our world toward greater complexity can be reversed and returned to Platonic simplicity. Three columns can do the work of nine or twelve. But that is exactly the point where I have doubts: I fear Mr. Loeffler has not stopped to test his *idea* against *reality*. In fact, it seems to me that he is in danger of failing to achieve his own objective. He appears to think that it is particularly important for the Congress to be able to control expenditures with great precision and is thus stressing a mechanical criterion to the exclusion of substantive policy values. Even so, his system would probably deprive Congress of some of the real control it now exercises.

Why would this be so? Because Congress would be focusing on *expenditures*, which it is impracticable to control without being exceedingly arbitrary, instead of on *obligations*, which it can and does control. To understand this it is necessary to grasp two facts. First, it is not feasible to estimate and control expenditures for the long lead time procurement and construction programs which constitute a large proportion of the budget total. Expenditures on such programs tend to follow deliveries on contracts by industry. The government has virtually no control over deliveries which lag, and contracts with cancellation clauses

[37] This does not mean that it is enough to deal merely in grand totals, as has been the tendency among those inspired by the "Keynesian Revolution." We need to know more about the composition of the federal budget and about the economic effects of different types of outlays.

will mean higher unit costs, as Mr. Loeffler recognizes. He also tries to depict the past experience with the Corps of Engineers and Bureau of Reclamation as satisfactory. I believe that a further study would show these programs have been highly resistant to budgetary control—that once projects were started it was virtually impossible to reduce their expenditures without great waste.[38] Thus, controllability of expenditures in the military, international, and natural resources functions is extremely dubious. If the Congress were to approve the budget on an expenditure basis, it would merely be ratifying a *fait accompli* in such programs. Nor would it gain materially in control over the other programs, since those which are on short lead time basis are virtually as controllable on an *obligation* basis as they would be on an expenditure basis, while certain programs would be uncontrollable on either basis.

The second point is that Mr. Loeffler would increase greatly the use of contract authorizations. His scheme would make contract authorizations necessary for every program with a lead time between obligations and expenditures of over 90 days, which is now probably the rule rather than the exception. But contract authorizations are confusing and lead to abuse, as the Congress has already recognized. For the long lead time programs, the contract authorizations would represent the only feasible stage of control; yet the legislators would find it easy to close their eyes—since contract authorizations would not have to be "paid for" until "next year."

A tentative suggestion. Reasoning from the organic realities of the government programs which have been described, I would suggest the need for a practicable budget presentation to highlight two stages:

1. *The new authority to incur obligations* recommended for the budget year, which would be the *action* program placed before the Congress. This new authority should be provided only in the form of appropriations. The various other kinds of authorizations should be outlawed, just as the House Committee on Appropriations has directed with respect to contract authorizations. The new appropriations should probably be made available for obligation purposes for only a single year (except for one-time projects, such as the construction of a building); for expenditure purposes availability might generally be adjusted according to the needs of the program (e.g., two years or less in most cases instead of the present three; specific approval by Congress to be required for anything over three years).
2. The estimated *expenditures* in the budget year to inform the Congress as to the *performance* by the agencies on programs financed by obligational authorizations in prior years as well as those recommended for the budget year.

[38] See, for example, *Budget, 1951*, pp. M65 and 1121-1128 which indicate that continuing projects accounted for 95 per cent of estimated budget expenditures for civil public works in fiscal 1951. It is also interesting to note that compilations of budgetary practices of the states indicate that the availability of appropriations for public works and roads is often extended beyond the period for which appropriations for other purposes are available. See J. Wilner Sundelson, *Budgetary Methods in National and State Governments* (Special Report of the State Tax Commission of New York, No. 14), (Albany: 1938).

This is, of course, only a *simplified* version of what is done now in the budget document. In addition, the *bridge* between *obligational authorizations and expenditures,* presented publicly for the first time in the 1952 budget, should be improved so that the Congress and the public will know how the two are related, since the expenditure lag differs according to the type of program. Actually, three improvements need to be made to present a good bridge: (1) data on unobligated and unexpended prior year authorizations should be presented in conjunction with the new requests; (2) the bridge should be presented not only in the present summary form but also in the detailed " green sheets " for each appropriation account; and (3) the bridge should connect *expenditures* with *new obligational authority.*[39]

Most of these suggestions should be self-explanatory. Yet the question might be asked: Why retain the *new obligational authority* stage when it complicates matters? Briefly, again, the answer is: (1) It is at the stage at which it authorizes the agencies to incur obligations that the Congress really exercises budgetary control. This is also the stage at which the bulk of executive and administrative control over the budget is exercised. For a big segment of the budget, expenditure control is impracticable. (2) Expenditures are usually the best measure of the economic impact of budget programs. But this is not so for a rapidly changing program. For example, in the fiscal years 1951 and 1952 *obligations* (reflecting especially defense contracts placed) were perhaps a better indicator of the economic impact of the budget than expenditures. Data at both stages are thus needed so the Congress can be fully informed.

These suggestions are offered under no illusion that they are " the solution " to the budgetary problem. But at least some claim of realism can be made for them. In this field no solution can hope for much success which fails to take into account the existing institutions, basic governmental objectives, the substantive nature of government programs, and the necessity for reporting fully to the public.

[39] Some of these improvements are made in the budget for the fiscal year 1953.

MR. MARCH VS. ALICE—IN BUDGET-LAND

HERMAN C. LOEFFLER

A YEAR AGO I proposed a three-way statutory program in these columns to help restore vanished congressional control of the purse strings by basing appropriations on expenditures, rather than on obligations. Now Mr. March publishes the accompanying lengthy critique which argues that my proposal would provide even less fiscal control by Congress. Having had my original say, this brief rebuttal must be limited to two or three major points.

Mr. March's challenge, unfortunately, yields comparatively little information of value to the reader in assessing my specific suggestions, according to his lights. As will be noted, most of his text is devoted to exploring largely extraneous facts, such as that the federal budget is very big and very complicated, and that various important appropriations are relatively inflexible in amount. To me, these admitted facts only demonstrate more forcefully the great need for improvements in the present unsatisfactory "obligation" basis of budgeting, of reporting, and of fiscal controls.

Mr. March does use a small part of his available space to criticize my proposed use of (a) contract authorizations to govern the total amount of multiyear contracts, and (b) separate annual appropriations to control expenditures thereunder from year to year. His most important point is that it is not feasible to make adequate estimates to "control expenditures for the long lead time procurement and construction programs which constitute a large proportion of the budget total." [1]

In this brief rebuttal I can only say that experience in other countries, in other levels of our government, and in private industry seems to me to indicate that such estimates are feasible, though difficult and perhaps inexact in some instances. The problem involved is manifestly not one of the work under given multiyear contracts progressing less rapidly than was anticipated, because then the appropriation will be more than adequate. Rather, the problem is one of greater accomplishment than would normally be expected, causing a shortage of available funds.

As my original article indicated, however, several methods are available to introduce sufficient flexibility to meet the problem of faulty advance estimating, such as: (1) appropriate annually on the basis of the work under contract going forward at maximum speed because the most favorable conditions develop, and direct the Bureau of the Budget to hold in nonexpendable reserves those amounts which should not be spent if and when less favorable developments materialize, or (2) appropriate on the basis of average developments, and use supplementary appropriations if more money is needed.

[1] M. S. March, "A Comment on Budgetary Improvement in the National Government." See page 171 of this issue.

In further brief reply to Mr. March's criticism, the fact should be emphasized that the present obligation basis of appropriation includes the whole of a multiyear project in an annual appropriation, and abandons to the executive branch control of the work thereunder during the three years that may be necessary for completion. On the other hand, my proposal would require reconsideration of each project annually to determine the proper amount of appropriation for that year. In view of this requirement of annual reconsideration by Congress, it makes little sense for Mr. March to assert that my proposal would weaken the fiscal controls of Congress, whatever may be said about the executive branch.

Mr. March also argues that the contract authorizations which I propose for future multiyear projects are confusing and lead to abuse since they do " not have to be 'paid for' until 'next year.' " [2] Actually, under my proposal Congress would not only be required originally to consider and act on proposed new contract authorizations, but it would then also have to appropriate annually for all estimated expenditures to occur not only under any new contracts to be awarded, but under prior year contracts still under way. In such circumstances abuse would seem to me infinitely less likely than at present.

Mr. March closes with a statement favoring the present obligation basis of appropriations, plus " a bridge " in both the summary and detailed tables of the budget document between obligations and expenditures. That way lies the mounting despair over the public's comprehension of the budget process and document in recent years which Mr. March admits but does little, if anything, to dispel.

For my part, again I insist on the need of an easily understood appropriation picture that authorizes and then controls dollarwise, as nearly as practicable, the work actually to be done in the year ahead. That objective is the dominant consideration if Congress is once again to obtain control of the purse strings. And that approach has force and validity, the animadversions of Mr. March notwithstanding, whether the financial plan for the year ahead—the federal budget—is or is not designed to be in balance.

[2] March, *op. cit.*, p. 172.

ANNEXATION AND TAX RATES

ROBERT C. SCHMITT *

WHAT effect, if any, does the annexation or nonannexation of surrounding territory have on the tax rate of a central city?

The problem is becoming increasingly important. A large segment of America's urban population now lives in small towns and unincorporated areas immediately outside the boundaries of large cities.[1] These persons live beyond the political and financial control of the cities, yet in all other ways share in their economic and social life.

Some recent writers feel that suburban residents create added tax burdens for the central city population. Richard Graves notes, for example, that ". . . these urban unincorporated areas are being provided an urban standard of municipal services by the county government at the expense of all the taxpayers within the county, including the taxpayers within the city." He urges either a stepped-up annexation program or a drastic revision of taxation practices.[2]

Other authorities are somewhat skeptical. A report by the American Society of Planning Officials states:

> It is frequently argued by the central city that annexation should take place because it will broaden the tax base of the community and thereby make possible a lower tax rate. This argument is often as fallacious as the contention advanced by suburban residents of underserviced areas that their tax rate is lower than the central city's. . . . [In reality] the annexing city may have to invest large amounts of money, often in excess of the increased revenue, to bring the service level of the annexed territory up to city standards. . . . The fact is that most annexed areas require large expenditures for capital improvements during the first few years after annexation.[3]

An earlier study by the present author partly explored this relationship. Twenty cities with a large fringe population in 1950 were compared to 20 comparable cities with little fringe population. There was little difference in their 1950 tax rates.[4]

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[1] See the U. S. Bureau of the Census, "Population of Urbanized Areas: April 1, 1950," *1950 Census of Population—Preliminary Counts*, Series PC-3, No. 9, February 1, 1951.

[2] Richard Graves, "Fringe Areas Should Pay Their Own Way," *Public Management*, 34 (February, 1952), pp. 30-33.

[3] American Society of Planning Officials, *Annexation of Urban Fringe Areas* (Chicago: Planning Advisory Service, Information Report No. 30), September, 1951, p. 11.

[4] Robert C. Schmitt, "Fringe Growth and Tax Rates," *National Tax Journal*, IV (December, 1951), pp. 370-371.

The present study relates recent trends in tax rates and annexation practices. All 36 American cities with a 1950 population between 220,000 and 680,000 were included in the study. For each the following ratios were computed: 1) population annexed, 1948-1950, as a percentage of the 1950 city population; 2) area annexed, 1948-1950, as a percentage of the January 1, 1948 area of the city; 3) persons per square mile in the annexed area; and 4) percentage increase in city tax rate between 1948 and 1951.[5]

Annexation practices differed widely in these cities during the three-year period under study. Eighteen of the 36 reported annexations in excess of one-quarter of a square mile. The population annexed ranged from none (in two annexing cities) to more than 100,000 (for Houston, Texas). In total area annexed the range was from .26 square mile (San Antonio) to almost 81 square miles (for Houston).

There was less change in city tax rates, trends ranging from a 12.3 per cent decrease (in Fort Worth) to an increase of 19.1 per cent (in Columbus, Ohio). These percentages are based on "actual tax rate as levied per $1,000 assessed valuation." City, school, county, and state taxes were included for purposes of comparability.

[5] Basic data on annexed areas were given in Clarence E. Ridley and Orin F. Nolting, editors, *The Municipal Year Book, 1949* (Chicago: The International City Managers' Association, 1949), p. 100; *The Municipal Year Book, 1950*, p. 99; and *The Municipal Year Book, 1951*, p. 102. Tax rates were taken from the Bureau of Governmental Research, Detroit, and the National Training School for Public Service, "Tax Rates of American Cities," *National Municipal Review*, 38 (January, 1949), pp. 21-39, and the Citizens Research Council of Michigan, "Tax Rates of American Cities," *National Municipal Review*, 41 (January, 1952), pp. 18-37.

No real difference appeared between tax rate trends of cities annexing a large fringe population, cities annexing a small fringe population, and those making no annexations whatsoever. The 18 nonannexing cities had a mean increase in rates of 4.92 per cent. Among the ten cities in which the annexed population amounted to less than 2 per cent of the city total in 1950, the average increase was 5.41 per cent. The eight cities with annexed populations exceeding 2 per cent of the 1950 city total had average increases in tax rates of 4.29 per cent. These small differences were not statistically significant.[6]

There was even less difference in tax rate trends with respect to proportional area annexed. As noted above, the 18 nonannexing cities reported an average increase in rates of 4.92 per cent. Ten annexing cities increased less than 10 per cent in area; for this group, the average tax rate increase was 4.95 per cent. The eight cities which expanded more than 10 per cent in area had average tax rate increases of 4.86 per cent.[7]

Whether the areas annexed were sparsely or densely populated did not appear to have much bearing on tax rate increases. The nine cities annexing territory with fewer than 1,450 persons per square mile recorded an average increase in tax rates of 5.62 per cent. The nine cities in which the density of territory annexed during the three-year period was more than 1,450 persons per square mile had an average increase in tax rates of 4.20 per cent. As

[6] Between nonannexing and under 2 per cent cities the critical ratio (a measure of sampling significance) was .17; between nonannexing and over 2 per cent cities, .27; between under and over 2 per cent cities, .50.

[7] All three critical ratios were under .05.

in the preceding comparisons, the nonannexing cities occupied an intermediate position (4.92 per cent). These differences were somewhat greater than the preceding ones, but still not statistically significant.[8]

Thus, the data for the three-year period, 1948-1950, show little correlation between annexation practices and changes in central city tax rates, but the reasons behind this lack of correlation are obscure. The period analyzed is short, perhaps too short to show the impact of annexation or nonannexation which may not strike city tax rates until long afterwards. Another possibility is that the added (or diminished) financial burden resulting from annexation practices is absorbed by lowering (or improving) municipal services within the central city. Data are not yet available to test these hypotheses adequately.

[8] Between nonannexing and low density-annexing cities the critical ratio was .24; between nonannexing and high density-annexing cities, .30; between low density- and high density-annexing cities, .59.

BOOK REVIEWS

The Nature and Tax Treatment of Capital Gains and Losses. By LAWRENCE H. SELTZER, with the assistance of SELMA F. GOLDSMITH and M. SLADE KENDRICK. New York: National Bureau of Economic Research, 1951. Pp. xxii + 554. $7.50.

This volume by Lawrence H. Seltzer is one of a series of fiscal studies on major tax subjects sponsored by the National Bureau of Economic Research. It represents the fruition of an undertaking, begun in 1943, to investigate the facts and main issues in the controversial area of capital gains taxation. Publication of Professor Seltzer's study at this moment is particularly timely, following two recent episodes in tax legislation involving important capital gains revisions and in the face of continuing demands on the revenue system which call for careful reappraisal of sources of structural weakness. The persistent and creeping spread of preferential capital gains treatment remains one of the most intriguing questions of contemporary tax development.

Although the study is primarily in the field of tax policy, it also presents valuable material on the economic nature of capital gains and losses that is of wider interest to economists and national income analysts. Its stated objective is not to arrive at specific policy recommendations but to provide the factual and analytic background for a more informed judgment.

An introductory chapter outlines the issues and appends an informative, condensed history of the statutory definition of capital assets under the successive revenue acts 1913-1950. A pair of chapters then deal with the special legal status and the economic nature of capital gains and losses. There follows a key chapter on the central issue: Are capital gains appropriate elements of taxable income? Four succeeding chapters present detailed findings of fact with regard to the amount and distribution of capital gains and losses for the period 1917-1946 and the effects of changing tax treatment of capital gains, losses, and short-term capital transactions upon investors' behavior and upon federal revenues. The basic tables and an unusually complete description of the sources and methods used in compiling, processing, and adjusting the

data are presented in the appendixes. Additional chapters present the product of extensive research on tax avoidance through capital gains and the tax treatment of capital gains and losses in foreign countries. A final chapter appraises competing alternatives for the taxation of capital gains and losses.

Although the book is a monumental contribution, it compresses the essential analysis. The exposition of difficult and complex matters is lucid, without oversimplification. Professor Seltzer's virtuosity in this respect makes the book almost equally valuable to the intelligent layman and the professional economist or tax practitioner. Other fine features of the book are its liberal use of actual case material and breadth of information on financial institutions and practices. Although the restraint of eschewing positive policy recommendations must have been irksome to the author at times, the reader is left with an adequate summary of the considerations and issues from which he can take his own position.

At the outset, the author sketches the controversial considerations bearing on the basic policy questions: (1) Are capital gains income and property taxable as such? (2) Does their taxation have undesirable practical effects? (3) Is the revenue yield from capital gains worth its administrative cost? Emphatic recognition is given to the prominence of realized and unrealized capital gains in the American economy, their importance as a source of private fortunes, the role of reinvested corporate earnings in the creation of capital gains, and the resulting close relationship between the tax treatment of capital gains and the whole question of the method of taxing corporate profits.

The chapter on legal and judicial background traces the origin of our basic income concept to the harvest tradition of annually recurring income into which casual and sporadic gains from sale of property did not fit. This is held to have governed early English and Continental judicial concepts designed for entailed and trust estates, in which income is characteristically recurrent and capital is a physical thing or *res*, typically land, rather than a pecuniary value. American jurisprudence is regarded as having developed a hybrid concept, based in part on the British tradition but governed by a more comprehensive statutory definition of income appropriate to the American economic scene. Thus the American judicial doctrine that to be taxable gains must be " realized " is attributed to the *res* as distinguished from the value concept of capital investment inherited from the British common law. Professor Seltzer's preoccupation with the realization principle may suggest a latent preference for the opposing view, reflected in his later approach to the possibility of annual recognition of accrued capital gains and losses.

From the standpoint of general economic theory, Professor Seltzer contends that the essential element in a capital gain or loss is its unexpected or windfall character. By contrast, the conventional and legal concepts emphasize their source in capital assets. However, on closer scrutiny the practical difference between the two views shrinks, since the category " capital assets " is customarily restricted to fixed assets held primarily for income rather than resale. Pure capital gains have their genesis in three main kinds of unexpected economic change: (1) in expectation of net receipts from the capital asset, (2) in interest rates, and (3) in risk discount (disposition of investors to face uncertainties). Professor Seltzer concedes the usual distinction between " real " and illusory or pseudo gains and losses reflecting variations in the general price level.

Perhaps undue importance is attached in Professor Seltzer's theoretical analysis to the windfall definition since the major issues relate to the conventional species of capital gains which he recognizes are generally mixtures containing elements of ordinary income. Moreover, he observes that operating profits contain fortuitous elements. The distinction between pure capital gains and

other forms of income becomes further blurred and nonoperational since changes in capital values are almost always expected or sought after in some degree. Being unexpected, pure capital gains by definition are functionless since they cannot serve to reward or allocate scarce factors of production.

Pure windfalls not only do not command the basic incentive and equity considerations invoked on behalf of preferential tax treatment of capital gains but, as Professor Seltzer elsewhere points out, may call for especially heavy taxation as unearned increments. It is not surprising, therefore, that the windfall definition of capital gains serves no useful purpose for the balance of the discussion.

On the central question whether capital gains are appropriate elements of taxable income, Professor Seltzer holds that the equity considerations for income averaging become compelling in the case of capital gains and losses. Viewed in their best light, the preferential rates on capital gains are deemed an offset to the results of applying graduated rates to long-accruing or other irregular capital gains.

Claims by Irving Fisher and others that the capital gains tax falls on capital or results in double taxation, since the value of a capital asset represents the discounted value of future income, are rejected on grounds that (1) capital gains may finance consumption, and (2) this contention would apply to any type of saving, and (3) a concept of taxable income confined to consumption, as urged by Fisher, would be too narrow for most purposes. Similarly, the argument that there is generally no social income corresponding to capital gains and consequently a tax on these amounts does not fall on true income, is met by pointing out that taxation is concerned with the distributional aspects of income and it is irrelevant for equitable tax purposes whether a particular income has a social counterpart.

In his discussion of capital gains arising from interest rate changes, Professor Seltzer attaches serious weight to the claim that such gains are illusory or that their reality is at least debatable. He suggests that a tax penalty results from realizing such gains under the present treatment. In discussing tax avoidance techniques, however, he provides a revealing discussion (pp. 248-249), of how interest may be converted into capital gains by switching out of securities with high book yields when market rates of interest fall. By paying the lower capital gains tax on the appreciation the taxpayer can then amortize these amounts against ordinary income taxable at higher rates. The inconsistency of these two positions is nowhere reconciled.

Nor does there seem to be real reason for entertaining doubt as to the reality of such gains. The realization of increased capital values due to a decline in market rates of interest permits immediate conversion in the guise of capital gains of income which would otherwise be deferred, and permits the investor, in effect, to prepay some tax on interest income at bargain rates. Indeed, it seems fair to say that gains due to a decline in interest rates are not only full-fledged capital gains but are generally in the nature of disguised ordinary income.

The inconsistency of the book on this point may be related to flaws in the illustrations of bond transactions reflecting the results of the realization and reinvestment of capital gains due to a decline in interest rates. On page 94, for example, a hypothetical case is cited of an individual owning $100,000 principal amount of 4½ per cent bonds purchased at par with 30 years remaining to maturity. The current market yield on similar bonds is assumed to decline to 3 per cent, so that the owner may realize a capital gain of nearly $30,000. The analysis suggests that if the investor reinvests the entire capital gain along with his original principal he is in position to maintain an undiminished income of $4,500 a year

for 30 years from his bond portfolio, provided no part of his capital gain is taxed away. Actually, it is apparent that reinvestment of the entire proceeds amounting to about $130,000 at 3 per cent would in no event result in the same current interest income, but a reduced income of $3,900. The difference is capitalized, a fact which is the key to the tax-avoidance aspects of such transactions. The only situation to which Professor Seltzer's analysis would strictly apply is the special case of sale and repurchase of perpetuities, a transaction without substantive effect on current income. A similar error occurs in the illustration of the bond transaction on page 283; here, however, the example shows an undiminished current income from the proceeds of sale by assuming a larger capital gain than is consistent with the assumed decline in interest rates.

With respect to the alleged obstructive effects of taxes on capital gains, Professor Seltzer recognizes clearly the role of the exemption of capital gains at death and the realization criterion rather than the tax *per se*. Distinguishing between the deterrent effects on realization and on business iniative and investment, he notes that the practical effect of preferential treatment has been to offer a special stimulus to all ventures whose rewards can take the form of capital gains.

In the quantitative sections, Professor Seltzer and his assistants have done an excellent job of marshalling and interpreting an unwieldy mass of complex data, filling in the gaps by ingenious methods, and boiling down the significant conclusions. The resulting information on the distribution and effects of the capital gains and loss provisions gives an unusually complete picture of a taxpayer group and its behavior. While some of the findings merely confirm or clarify what was already known or expected in a general way, others throw new light on institutional developments in relation to tax policy.

The analysis of the effects of changing tax treatment upon federal revenues deals with contentions that the capital gains tax is an undesirable revenue source because of its fluctuating yield, that a uniform low-rate tax would cultivate a broader revenue base of capital transfers, and that capital gains revenue is not worth its administrative cost. Professor Seltzer points out that instability of yield is no longer considered a serious defect and is a virtue from the standpoint of countercyclical fiscal policy. The fluctuating character of capital gains revenue is now quantitatively unimportant anyway in relation to enlarged total revenues. The alleged productivity of low-rate capital gains taxation is challenged by the empirical findings that the amounts of capital gains and losses realized depend primarily on the trend and level of stock market prices rather than the tax rate. Equally significant, apparent net revenues from special capital gains treatment reflect not only the volume of capital transactions but also the extent of tax avoidance by this route. Moreover, no capital gains rate, however low, can compete with a zero rate on transfers of gains embodied in wealth transferred at death.

The exclusion of capital gains and losses from taxable income would not, in Professor Seltzer's opinion, remove the major administrative and compliance burdens since it would enhance the importance of distinguishing between capital and ordinary transactions. He suggests that if the diminution of such difficulties were the objective, it would be more logical to move in the opposite direction, reducing the differential in favor of capital gains.

The discussion of tax avoidance through capital gains presents a revealing picture of the technical devices used to transform various types of ordinary income into capital gains for tax purposes. Some of the loopholes discussed have since been more effectively closed under the Revenue Act of 1951 (for example, variations of the col-

lapsible corporation and dealers in securities), while other types have been further enlarged (corporate spin-offs, coal royalties, unharvested crops and lump sum termination payments under employee profit-sharing plans). The exposition in this area is restricted to obvious types of unintended benefits through contrivances designed to camouflage ordinary income. This approach neglects important aspects of the problem since capital gains treatment in a number of fields is a matter of deliberate legislative policy. Pressure is constantly being exerted for legislation to expand and liberalize such areas, in lieu of averaging, to confer equal treatment with similar groups already enjoying preferential treatment, or on other grounds. In short, the problem of the legislatively sanctioned capital gain is at least equally serious as the "illegitimate."

The survey of foreign experience with respect to the tax treatment of capital gains and losses reveals two significant characteristics: (1) the discernible trend in various countries toward modification of the previous exclusion of capital gains and losses from the taxable income concept, and (2) the notably more liberal treatment of capital gains of corporations and, in particular, gains from sale of business property under federal law as compared with the general pattern abroad, outside the British Commonwealth.

Among the competing proposals considered are: (1) full annual recognition of both accrued and realized gains and losses, (2) cumulative averaging of income from all sources, (3) taxation of unrealized gains and losses embodied in gift or death transfers, (4) specific averaging devices restricted to capital gains and losses, including optional periodic averaging as proposed by Simons, Groves, and others, (5) various methods of prorating capital gains and losses forward or backward, including capital loss carrybacks and carryforwards. Noteworthy by their absence are various possible revisions within the present framework, such as the segregation of "traders" from ordinary investors and the taxation of their gains as ordinary profit, the modification of section 117(j) in order to tax as ordinary income profits from sale of business property, the revision of existing statutory provisions declaring particular types of income to be capital gains, lengthening of the holding period for long-term gains, and reduction of the rate differential between capital gains and ordinary income. From the practical viewpoint, the emphasis given to averaging and proration devices may appear inconsistent with the expressed view that concern over market effects has had a controlling influence upon the evolution of capital gains treatment since these methods would result in little, if any, reduction from ordinary tax liabilities for many taxpayers with large, comparatively stable incomes from varying sources.

Professor Seltzer's book is a classic contribution to our knowledge and understanding of capital gains taxation. It will be read with interest by both opponents and proponents of the present system of preferential treatment. It constitutes an indispensable source of wisdom and information for those concerned with the future development of this aspect of the tax structure.

RICHARD E. SLITOR

Washington, D. C.

Revenue and Expenditure of Selected States in 1951. By U. S. BUREAU OF THE CENSUS (State Finances: 1951, No. 3). Washington: March, 1952. Pp. 18+ tables.

The Governments Division of the Census Bureau recently completed the major assignment of overhauling its classification structure for reporting on state and local finances. From this report—the first in the fiscal 1951 state finance series containing information on both expenditures and revenues—it is apparent that Allen D. Manvel and the staff of the Governments Division have done a remarkable job. The extensive

revisions unveiled here in summary form (complete information will be included in the annual *Compendium*, to be published in July) will greatly enhance the usefulness of a series which has always been quite valuable.

The improvements are concentrated in the two areas in which the Census reports on government finance have been most useful in the past. First, they have been invaluable in obtaining over-all totals of receipts and expenditures for both individual governments and all states or all cities over 25,000, totals which are free from the reporting vagaries and prejudices of particular public agencies and officials. Second, they have been the best source for information on specific sources of revenue and specific purposes and programs of expenditure.

The classification improvements with respect to over-all totals consist of very great strides in extending their inclusiveness. In the old system state finances were reported on the basis of four distinct segments: general government, enterprises, sinking funds, and trust funds. The data for the segments were not strictly comparable. Moreover, they were not additive, in part because intragovernmental transactions between the segments were included in the figures, in part because some figures were reported after income and outgo had been netted, and in part because a number of governmental trust fund operations were excluded from all the data. In the new classification there are three segments: general government, liquor stores, and insurance trust. Data for these segments are consistent; they exclude intersegment transfers and they include previously excluded trust fund operations. Thus, when receipts and expenditures for the three segments are added, and borrowing and debt repayment are considered, the totals represent a complete statement of all external financial transactions of state governments except investment operations. Moreover, the receipts and disbursements of a number of agencies previously considered to be autonomous special-purpose units of government are now included in the state government figures.

The data for particular sources of revenue and particular expenditure functions are also improved because of the more comprehensive coverage. In addition, the functional breakdowns for expenditures are both more detailed and more usefully aggregated. For example, the highway expenditure category includes gross expenditure of toll highway facilities and excludes waterway expenditures which were formerly included. The latter is one element of a new and very useful "nonhighway transportation" category, which also covers expenditures for airports and port and terminal facilities. Other valuable new categories are "housing and community redevelopment," "natural resources," and "employment security administration." The public safety and education categories are substantially revised, with separate figures provided under education for state institutions of higher education.

In all, the revision is a delight to the researcher interested in almost any aspect of public finance. The fact that the new classification has been developed in connection with preparations for a 1952 Census of Governments is all the more reason for those connected with public finance to hope fervently that Congress will provide funds this year for the conduct of the Census.

D. NETZER
Federal Reserve Bank of Chicago

The Arkansas Tax System—A Comparative Analysis. By EDWARD W. REED. Fayetteville, Arkansas: Bureau of Business and Economic Research, College of Business Administration, University of Arkansas, December, 1950. Pp. 219.

This study presents an analysis of the Arkansas tax system and a comparison of the burden of local and state taxes in Arkansas with the burden of similar taxes in Alabama, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, and Texas. Taking each of the more important taxes in turn, Professor Reed describes the tax base and tax rate used, problems of administration, and the comparative importance of the tax as a revenue producer in each state.

Total state and local taxes are then combined and expressed in absolute per capita terms and as a percentage of per capita income in the several states during years of the 1941-1948 period for which data are available. In absolute terms, the per capita burden in Arkansas is shown to have been lower during 1948 than in any of the other states in this group, with the possible exception of Alabama; Louisiana is ranked first. When the per capita tax burden is expressed as a percentage of per capita income, Louisiana again ranks first, Arkansas next to last, and Texas last.

1951 Guidebook to California Taxes. By RUSSELL S. BOCK. Chicago: Commerce Clearing House, Inc., 1951. Pp. 255. $3.00.

This book is designed to meet the need of businessmen and tax practitioners for a quick reference work on California state taxes. As such, the major part of the book is devoted to a description of the four taxes which are of primary concern to these groups: the personal income tax; the bank and corporation franchise tax (levied on net income); the inheritance tax; and the gift tax. Assuming that most people who are required to deal with California taxes have some familiarity with the federal tax laws, the author has whenever possible explained these four taxes in terms of the comparable federal taxes. Cross-reference tables are supplied which permit a given provision of one law to be related to the comparable provision in the other. However, the description of the California law is readable and, in general terms, is designed to be complete in itself. Special attention is given to subjects peculiar to the California law.

The corporation income tax, sales and use taxes, and unemployment insurance tax are explained in general terms, and information regarding rates and imposition of the tax is given for all of the other taxes levied by the state. Local property taxes are also discussed in one brief chapter. Throughout, the references to California and federal law are to the law as it stood on December 31, 1950.

The American University Tax Institute Lectures, Vol. 3. Edited by DR. FRITZ KARL MANN. New York: Matthew Bender & Co. Inc., 1951. Pp. 374. $10.00.

This volume contains the papers of nineteen speakers who addressed the fifth annual meeting of the Institute on Federal Taxes. The Institute is sponsored by The American University, Washington, D. C. Proceedings of two earlier meetings have also been published.

The scope of this last volume is best indicated by the major topics to which the papers are addressed: 1) Conflicts between tax law provisions and accounting and economic concepts; 2) Taxation of corporate distributions; 3) Taxation of trusts; 4) Tax problems in corporate financing; 5) Taxation of real estate transactions and sales of businesses; 6) Taxation of contracts between employer and employee; 7) Fraud in tax matters. With one or two exceptions the contributors are attorneys, and for the most part their papers deal with technical aspects of tax law.

NTA NOTES

SPECIAL AND ANNUAL MEETINGS OF THE ASSOCIATION

The newly amended by-laws, which appear in print for the first time in the PROCEEDINGS of the Dallas Conference, require that the notice of the forthcoming annual meeting be accompanied by the list of nominations by the Nominating Committee. At the time this issue of the JOURNAL went to press, the Nominating Committee had not completed its deliberations. Consequently, the official notice of the meeting will be mailed to all members at least 60 days before the next conference.

It may be unofficially predicted at this time, however, that the annual meeting will be held in the Royal York Hotel, in Toronto, Canada, at 9:00 A.M. on September 11, 1952. At that time, officers, three regular members of the executive committee, two honorary members of the committee, and any other members required to fill vacancies will be elected.

The official notice of the annual meeting will also advise you of a special meeting to be held on the opening day of the conference. The Nominating Committee that is to report a year from now will be selected at this meeting, two by appointment and three by election.

We hope that you will be in attendance at both meetings and throughout the Conference with which they are scheduled.

RONALD B. WELCH
Secretary

FORTY-FIFTH ANNUAL CONFERENCE

SUMMARY OF PROCEEDINGS

Monday, September 8

2:00 to 8:00 P.M. Registration

Tuesday, September 9

9:30 to 12:00 M. First General Session

The Canadian Tax Structure and the Economy

Major Features of the Canadian Tax Structure—Federal, Provincial, and Local

The Canadian Corporate and Personal Income Taxes and the Economy—Rates, exemptions, over-all burden, capital gains and losses, depletion, depreciation policy, why no excess profits tax, investment and inflation, etc.

The Canadian Manufacturers' Sales Tax and the Economy—Rates, administration, avoidance of pyramiding, etc.

General Discussion

12:15 to 2:00 P.M. First Conference Luncheon

Speaker to be announced

2:15 to 5:00 P.M. Three Round Tables

First Round Table—The Role of the Property Tax in State, Provincial, and Local Revenue Systems

What Should Be the Role of the States and Provinces in the Property Tax Field?

Should the Property Tax Be Limited to a Tax on Real Estate?

Evaluation of Alternative Bases for the Property Tax

General Discussion

Second Round Table—Comparative Treatment of Selected Tax Problems in Canada and the United States

The Personal and Corporate Income Taxes—rates, structure, depreciation, depletion, carryback, capital gains and losses, etc.

Sales and Use Taxes—rates, exemptions, administrative problems, manufacturers' versus retail sales taxes, etc.

Third Round Table—Who Pays the Taxes?

7:30 to 10:00 P.M. Second General Session
In honor of long-time members

Wednesday, September 10

9:30 to 12:00 M. Third General Session
Fiscal Policy in the Cold-War Period
The Expenditure Problem—emphasis on control aspects
The General Problems of Federal Tax Policy
Monetary and Public Debt Aspects of the Fiscal Program
General Discussion

12:15 to 2:00 P.M. Second Conference Luncheon
Presidential Address

2:15 to 5:00 P.M. Three Round Tables
Fourth Round Table—A General Reappraisal of Coordination of Tax Systems in Canada and the United States
The Canadian Approach
The American Approach

Fifth Round Table—Control of Public Expenditures—federal, state, and local

Sixth Round Table—Property Tax Administration, Survey of Progress in Administrative Organization and Procedures for Assessment and Equalization

Thursday, September 11

9:00 to 9:45 A.M. Fourth General Session
Business Meeting of the National Tax Association

10:00 to 12:45 P.M. Fifth General Session and Round Table
Impact of the National Defense Program on State and Local Finance
Impact on State Governments
Effect of Defense Program on Cities
Effect of Defense Production on Taxable Property in Municipalities
General Discussion

Seventh Round Table—Problems in Taxation of Railroads and Public Utilities
Problems in Evaluation Techniques
Gross Receipts versus Property Tax
Types of Taxes Emphasized by Various States
The Problem of Comparing State Tax Burdens

1:00 to 2:45 P.M. Third Conference Luncheon
Speaker to be announced

3:00 P.M. Sight-Seeing Tour

7:00 P.M. Conference Banquet
Speaker to be announced

Friday, September 12

9:30 to 12:00 M. Three Round Tables
Eighth Round Table—Tax Problems of Small Business

Ninth Round Table—Taxation of Natural Resources

Tenth Round Table—Problems in Administration of State Retail Sales Taxes

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